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Edited by

RAI BAHADUR **SARAT CHANDRA ROY**, M. A., B. L., M. L. C.

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MAN IN INDIA.

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I. RESEARCH LEADS IN ANTHROPOLOGY IN INDIA.*

By

P. Mitra, M. A., PH. D., P. R. S.

Research leads from India which saw the starting of linguistic classification of mankind with the Asiatic Society of Bengal should be very many. Pater Schmidt's, Sten Konow's, and Grierson's work has shown how much more could be done even now and the Austro-Asiatic or Pre-Dravidian problem is justly again engaging the foremost attention of scholars. The Dravidian linguistic problem is still unsolved and the comparative study of Melanesian languages by Dravidian scholars seems to promise to open up new tracks. Similarly the experience gained by the study of the classification of the Amerindian languages would be very fruitful in dealing with the Tibeto-Burman languages and the remarkable linguistic affinities of some of these with languages like the Algonquin is well worth enquiring into.

---

* This was the Presidential Address to the Anthropological Section of the Twentieth Session of the Indian Science Congress, held at Patna in January, 1933.

In Social Anthropology it was Sir Henry Maine's Indian experience that could be said to have set the ball rolling with the patriarchal theory. Morgan's wonderful discovery of the value of terms of relationship was brought home to him by study as much of Hawaiian data as of the remarkable affinities of the Dravidian and the Senecan Indian system. The origin of exogamy is still shrouded in mystery but it is one of the fundamental problems of Hindu society where it has still sway. So Lowie's correlation of exogamy with the classificatory system of terminology, the Dakotan in America, and the Dravidian in India, is of interest. Radcliffe-Brown has suggested that the Dravidian, Australian and the Melanesian systems had forked out of the same common prototype. A detailed study of the primitive systems like that of the Dieri in Australia or of the Pentecost in Melanesia with the Birhōṛs of Chōṭā Nāgpur and some other primitive tribes such as the Old Kuki Aimols are yielding very promising results. The outstanding feature of the marital system of these areas would be, according to Rivers, a hypothetical gerontocracy which originated these conditions and much more that peculiar grandfather-granddaughter marriage that brought it about. Now gerontocracy is a problem of whose traces in some parts of India there are certain indications. The system has further the custom of ranking alternate generations as eligible for marriage. This Type II marriage in Australia would be that with the mother's mother's brother's daughter's daughter. Now this would be an alternative of eligibility of marriage with the mother's mother or mother's mother's brother's wife or alternatively the mother's mother's brother's granddaughter as another variant of the granddaughter marriage, of course all in a classificatory sence. The characteristic kinship terminology of this system would be to class the elder brother with grandfather and the elder sister with the granddaughter. Now this is exactly what is found in the eastern part of India where these terms are the same. There is a prevalent joking relationship between the granddaughter and grandson and the grandfather and the grandmother respectively. There is also a ranking of alternate generations as eligible for marriage rather than of consecutive generations amongst exogamous groups in certain castes in Bengal. Thus it would be possible to start with some ground for investigating the existence of the grandfather-granddaughter marriage in a classificatory sense in some parts of eastern India at least. This would be the primitive stratum in India. Over it has been superposed perhaps that section of people which practised cross-cousin marriage in India. This is definitely associated with the Dravidians, whose kinship terminology has made the terms for mother's brother, father's sister's husband and father-in-law identical as in Tamil; and mother's brother's wife and the father's sister are both called by the same name and the mother's brother's son, the father's sister's son and the brother-in-law receive the same name. This cross-cousin-marriage-practising people are, according to Rivers, a later immigrant stratum in Melanesia.

In Australia also we have the other type who practise the cross-cousin marriage. Thus these problems have to be studied in a wide field with geographical distribution and cultural dispersal over this wide area from India to the Pacific, and might have been brought about by the same causes—the migrations of new peoples or setting up of new culture standards. In any case, we have the succession of two strata both in primitive India and the Pacific, the earlier practising grandfather-granddaughter marriage in the classificatory sense (the marriage with the mother's brother's widow peculiar to Melanesia being perhaps a feature of matriarchal societies), and the later practising cross-cousin marriage. Similarly, according to Morgan, the Hawaiian system would be antipodal to the Aryan system, and Rivers has shown that the former far from being primitive is a result of later developments; and it is interesting to find how close is the parallelism between early developed Hindu culture in North India and Polynesia by reason of (*a*) the absence of sept exogamy in Hawaiian and possibly also in early Vedic society according to Karandiker,—(*b*) the definite occurrence of brother-sister marriages (as amongst the chiefs of Hawaii) in Pali traditions in India for reasons that are advanced which show very highly developed theories of blood-purity and laws of inheritance which brought into vogue this system only amongst the chiefs,—(*c*) privileged jocose relationship in later Hindu society between those who are *punaluan* relatives in Hawaiian terminology as also between brother's wives and sister's husbands,—(*d*) absence of the term for mother's brother probably in the earlier Vedic stratum as in Polynesian society.

The stratigraphic study of culture on the lines of the German school and mapping out of culture areas and definite distribution of traits of a culture complex is far more fruitful of results in the fields of material culture. If the theory of Matthew as to South Central Asia being the cradle of mankind be true and if since Miocene times there have been migrations of anthropoid and proto-man types from near the border of the Himalayas to the borders of the Pacific on the one hand and Africa on the other, India has very likely played a very prominent part in the distribution of early cultural traits if not of physical types. What we mean to say is that by the study of material cultural traits common to India, Africa, and the Pacific, we might arrive at those prototypes which are likely to be common and to have originated in a central home of dispersal. In physical anthropology as well, mere working out the old Karl Pearson formula of racial correlations would but reveal several different strands; and the branding of Mongoloid on some Alpine strains as by Risley is likely to be followed by similar blunders when one idea would reign supreme. On the other hand, it is likely that some undifferentiated protomorphic varieties from which sprang the Negro of Africa, on the one hand, and the Negritos of the Pacific, on the other, might have been the direct ancestors of some of the darkest tribes of India like the Kadirs who differ from the Negroes as much by the absence of the cinky hair as from the Negritos by being dolichocephalic instead of brachycephalic. The frizzly hair common to India and Melanesia has to be studied anew in detail and specially the hair of hybrid groups of the Negro, the Mongol, and the Caucasic.

Similarly the recent studies of Dr. Broom in South Africa are revealing the probable existence of a South African Australoid race who have left their mark on the physical features of the Koranna peoples and the Australoid problem in India cannot be studied in isolation from the data from Africa on the one hand and the Pacific on the other. The implements from early pleistocene in South Africa and those from South India, on the one hand, and Tasmania, on the other, reveal striking similarities. Is it a mere accident that these are made of quartzite and the predominant forms in these now separate regions are more or less the same in some marked contrast to the predominant European types? The rectangular *coup de poings* so characteristic of South India have just their match from South Africa, on the one hand, and the 'Tronattas' or aboriginal stone implements used by the Tasmanians, on the other. Mr. Cammiade's studies have shown the possibility of the succession of pluvial periods and dry epochs in India to have followed similar lines as in Africa. Are we to take it that the similar stone implements are the results of similar environments in South India and Africa? But the climate of

South Africa and Tasmania were entirely different from that of South India, and is it that in the stone implements of these three areas we have the mute records of common descent of an original type of culture from a central area? The study of stone implements is generally supplemented by an investigation of other primitive cultural traits for our knowledge of early man. Here the methods of American Cultural Anthropologists are of great help, for the mapping out of traits generally shows a centre of origin or dispersal. Further, the wider the distribution in space the greater the presumption in favour of greater antiquity of the trait concerned.

As a possible survival of the early stone age culture complex we could take up the boomerang—the famous throwing stick of the Australians. According to Graebner, as shown in his classic study of the Melanesian bow culture, there were five stratifications of which the old Australian culture with the boomerang was the earliest followed by totemistic culture and then a matriarchal dual organisation after which came the Melanesian bow-culture complex and still later the Polynesian culture. Now this boomerang culture-complex in Graebner's study is associated with the crudest shaped stone implements, the weather-screen used a dwelling and crude sticks. This weapon is common to India, Africa, and Australia—a fact known since the days of Pitt-Rivers who has described in detail all the Australian, African, and Indian examples; whereas two varieties, the returning and the non-returning type, come from Australia, the returning type is not known from India. Though Lubbock had objected to the classification of Indian, Australian, and African boomerangs together for the return flight is known from Australian weapons only, Pitt-Rivers was disposed to hold that this return-flight type was a special development in the Australian region. Thus the studies of Pitt-Rivers in the light of recent methods would make Australia the centre of origin of the boomerang and though peripheral it spread from that area to the entire region of this culture. Or it is possible that the return-flight type was once known to India and has disappeared with the tradition remaining only of a type of arrow that returned to its owner as recorded in the *Mahābhārata.*

Similarly the study of the bow which occurs over such an wide area of the Pacific and Africa as well as India could be studied profitably along with arrow-release distributions. Kroeber's study of arrow-release distributions has shown that between India and Melanesia the eight recorded cases of tertiary arrow-release have become intertwined with both primary and Mediterranean types of release in that area and the distribution shows a centering at least of the Mediterranean release in India, of the tertiary release in or near Indo-China, and of the primary along the eastern Pacific edge of the area.

The problem of the dispersal of such domesticated plants as the taro and the banana as well as of such domesticated animals as the fowl shows a centre of dispersal near central or eastern India from which they spread to the Pacific on the one hand and Africa on the other, most probably in very early hoe-culture times preceding the introduction of regular agriculture. The South-East Asiatic origin of the hen has been recognised since the days of Darwin, for in those regions only the combed chickens occur in a wild state. It spread thence from Persia to Greece and Europe on the one hand and the furthest east on the other. In Assam and Chota Nagpur the domestication of the fowl had become a necessity on account of the ritual use of eggs for divination purposes, as Lowie opines in his 'Are We Civilised ?' It is this function that led to the propagation at first of this useful animal. Similarly so far as the taro is concerned there is evidence, according to De Dandolle, of the edible Colocasias being transplanted from India to Egypt and the studies of Rivers in his essays collected in 'Psychology and Ethnology' show the probable centre of origin of the taro in the centre of India from which area it spread eastwards and westwards. Similarly, perfectly seed-bearing banana being only indigenous to India it is very likely that all the very widely distributed varieties of bananas and plantains were propagated by migrating man from the original single species of *Musa sapientum* in India as Kew Garden botanists hold

Thus the comparative study of culture over intercontinental regions is likely to reveal the

2

important rôle of India as a primary or secondary centre of diffusion of cultures in several stages of her culture complex in the march of time. The first period would be in the earliest stone ages when India was not only sharing the common type of quartzite palæoliths with the eastern and western tracts but also perhaps the boomerang and possibly the simple type of fire-drill. Later came the bow and the musical bow complexes; and Miss Roberts in the course of her study of Hawaiian Music has made a strong case for the original home of stringed musical instruments in India. In early Neolithic times the problems become more complex but some of the earliest types of the domesticated plants and animals might have spread along with the hoe or the spade. The reckoning of the year from the Pleiades rising has been well known in Polynesia and was the current mode in early Vedic times in India and also in Africa. As Hirschberg has recently shown it was spread throughout the coasts of East Africa and also distributed over at least thirty-six tribes throughout Africa not excluding its occurrence in Old Egypt.

The simple type of rectangular habitations well known in the Polynesian area and very possibly the dominant North Indian form in Vedic times and also found in several regions of Africa might have as well got dispersed at this period.

The plough once thought to be developed from the hoe by Tylor and elaborately studied by Hahn who derived it from the hoe and the phallic symbol, has recently been studied afresh by Leser who in his masterly work divides the plough into two types, the four-sided plough and the plough where the rear side of the beam is curved (Pflug mit Krümel). The quadrilateral type is more widespread. The form of the plough-share of this type shows how the spade-forms so common in India since Neolithic times and the lunette spade celts in copper as from the Gungeria copper-finds would have been more likely to be in use as plough-shares. Still later the problem of the domestication of cattle is very important from the Indian standpoint. Associated also with this problem as perhaps of the same culture complex is that of the wheeled vehicle. The Indian cattle cart without the wheel occurs in the Manipur area as we found last year, and solid wheels are in use over a large part of India still, and wheeled vehicle toys of terra cotta occur in Mohenjodaro. Each of these problems will have to be taken separately and studied in detail, and later on the correlations have to be worked out with the help of distribution maps. A study of these simple things would be likely to recover for us the lost pages of the cultural progress of India in Neolithic and Chalcolithic times and would supplement the findings of the archæologists.

Finally, along with the philological, archæological, biometric, geographical and cultural methods of the West, India has also to seek inspiration from her own culture-patterns to be able to combine the methods and break into new paths. The philosophy of the Hindu Tattva of man has engaged the attention of its subtlest thinkers and philosophers from the earliest times to the present day. To them the study of man does not only reveal the sequences of human activities in historical and prehistoric times but, what is more it brings out the action, reaction, and interaction of energies from the highest states of consciousness or *Chit* to the lowest states of matter or *Jaṛ* as they call. As pithily put by Satyasravee 'the Hindu view-point would be this :—The side of the finer aspect of creation is *Chit* or Consciousness and that of the grosser is inert matter or *Jaṛ*. The mass of living beings is the result of the interaction of the different types of *Chit* energy in *Jaṛ*. Man is the result of the culminating interaction of the highest types of *Chit* in all types of *Jaṛ*. it is a far cry yet from the India of the day when it would not merely echo the modern West but would try its own methods to interpret anew the laws of nature and the predominant culture-pattern of India would lead it to its time old probing of all the secrets of creation through the introspection and scientific investigation of microcosmic man.

The provision for degree examination in Anthropology in M. A. and M. Sc. of the Calcutta University and also for the graduation course has popularised the subject and has brought into being that young band of earnest workers who are seen to be working at different centres. Specially the opportunities for submitting research thesis as part of work for the master's degree brought out important contributions in cultural anthropology and primitive ethnography such as the works of Mr. Nirmal Kumar Bose on the origin and significance of the *Holi festival*, of Sasanka Sarkar on the *Malpaharias*, and of Ramesh Chandra Roy on the *Kharias*. Research scholarships enabled Messrs. Prabhas Chandra Bose, M. Sc., M. B., Anil Kumar Choudhury, M. Sc., M. B., and Nirmal Kumar Bose, M. Sc., to continue their useful work on Chota Nagpur tribes, and blood-groupings.

The Premchand Roychand research studentship has called forth good work in Anthropometry and Craniometry on the *Brahmins of Bengal* by Tarak Chandra Ray Chaudury, M. A., on the *Hos* of Kolhan by Dhirendra Nath Majumdar, M. A., and on the craniometric data from Chota Nagpur by P. Bose, the latter two having spread the seeds to new centres such as Lucknow University and the Bose Institute from the Calcutta University. Of those whom we at one time or other reckoned as members of our staff we need only mention the late Rai Bahadur B. A. Gupte for work with Risley, Mr. Sarat Chandra Mitra for work on Indian folk-lore, Rao Bahadur L. K. A. Iyer for South Indian Ethnography, and last but not least Dr. B. S. Guha and Mr. K. P. Chattopadhyay to show how this department during the short period of its existence has been the starting or final refuge in some of the most brilliant careers in Anthropology in diverse fields in India. I do not want to tax your patience by a detailed list of work at present being conducted by members of the staff for a glance at the papers contributed would be sufficient to show the varied field now being tackled. Dr. A. Chatterjea has been working on the problems more affecting the welfare of the people and analysing about ten thousand data for finding the rate of growth amongst Bengali students. The ethnographic field work by Mr. T. C. Das in Manipur last year, thanks to the help offered by Mr. Higgins, brought out some new facts about dual organisation in Assam and this work with the generous promise of help with funds by Prof. Wissler from New York is hoped to be continued successfully. Thus with all its major preoccupation with teaching work the department has been carrying on research and we confidently hope that Behar which is a veritable Museum of primitive tribes would soon open in the Patna University a centre for Anthropological studies, under the lead of the renowned Anthropologist of Ranchi.

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II. CULTURAL AFFINITIES BETWEEN INDIA AND AFRICA. *

JIBAN KRISHNA GAN.

(Fellow of the Eugenics Society, London).

Now that a considerable amount of progress has been made in the study of social organisation, folk-lore, customs and usages of the Indian peoples, it would be worth our while at present to traverse some unknown tracks in the domain of Indian ethnology with the view of further elucidation of Indian culture. It is with this end in view, that I have undertaken to investigate the cultural traits common to India and Africa. Thus, it is cultural contact and not racial correlation in the strict sense of the term, that would be our main objective here.

Culture, as Tylor observes, "is that complex whole which includes knowledge, belief, art, morals, law, custom and many other capabilities and habits acquired by man". Leaving those traits such as beliefs, and customs for future consideration, we shall in the present article discuss only the material culture and several linguistic problems, which, I hope, may lead to some tangible results.

If the problem of ethnology is "the reconstruction of the cultural history of primitive people", then the long lost earlier pages of the ethnologic history of India may be reconstructed by "tracing the similarities of form (Form Kriterium)", the similarities of traits common to the two countries.[1] Though the civilization of these two countries appears, at first sight, to be totally different, closer investigation will reveal several cultural traits common to them.[2]

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* Read at the annual meeting of the Indian Science Congress, held at Patna, 1933.

F. Ratzel, that great German pioneer of the geographical school of anthropologists, was, I think, the first who was struck by the close similarities between several traits of material culture of Africa and India and Indonesia, so much so that he ventured to opine "when one has to speak of the ethnography of the African races one must always remember this half-enclosed bight, which might be called the Indo-African Mediterranean. Oceans separate countries and connect races. There are people settled in Madagascar whose nearest relatives live on the opposite edge, in Sumatra; and whatever culture is to be found in Africa points to Southern Asia". [3]

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[1] This is the central theme of the historical school of ethnology in Germany headed by F. Ratzel and F. Graebner. Ratzel's view has been exquisitely summarized by Wilhelm Schmidt, himself a follower of his school, in his book "*The Origin and Growth of Religion*" Tr. by H. J. Rose, London. 1931, PP. 220-221.

[2] It is an well-known fact that there are several Indian emigrants in Africa. But it may be pointed out that there are some emigrants from Africa also in India; and in the recent *Censu Report of Baroda*, are recorded nine persons in that State wh speak African language. (*The Census Report* 1931, Part I Baroda. By Mr. Satya. V. Mukherjea. P. 358). Moreover, th Ṣidi or Habshi Fakirs living in the same state, are "descendant of African Negroes" and speak now a "*patois* of Hindustani interlarded with Gujrati". They are worshippers of "Babaghar, a Abyssinian Saint, whose tomb stands on the hill near Ratanpu in the Rajpipla State" (loc. cit, P. 424). It has been furthe stated in '*The Bombay Gazetteer*' that "about the middle o the fifteenth century, when the Bahamani dynasty became independent of Delhi and intercourse with Northern India ceased the fashion arose of bringing to Western India large numbers o Abyssinians and other East Africans". vide. R. V. Russell—*Th Tribes and Castes of the Central Provinces of India.* (Vol. I P. 409. London 1916.

Mr. T. A. Joyce, another well-known anthropologist, believes in earlier intercourses between Africa and India, on account of "certain cultural features fairly widespread through east Africa", though he is doubtful about the influence of India on Africa. [4]

Dr. F. Graebner, [5] in his study of the bow-culture of Melanesia has found, so far as totemic complexes are concerned, relation between Africa, Southsea Islands, Australia, and India.

Prof. P. Rivet [6] has enumerated several cultural traits common to Oceania, America, and Africa and in his table can be found at least several traits which are found also in India.

The following are included in his lists :—
tambour à signal, tambour cylindrique à membrane de peau, masque de danse, têtes-trophées, étui pénien, emploi des écorces textiles, ponts suspendes, coquilles-monnaies, mutilations digitales en signe de deuil, arc à musique, churinga, flûte de Pan,

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[3] Ratzel—Races of Mankind, tr. by Butler. London, 1897. Vol. II. P. 237. In another place, he says "while yet earlier in East Africa ancient Hamitic and Arab, perhaps, also Indian influences, had extirpated or at least worn down much that was genuinely Negro, and while decomposition is the prescribed destiny of western border, in the interior old thing survived in a genuine state". (loc. cit, P. 250).

[4] Leys and Joyce—Note on Series of Physical Measurements from East Africa, J. R. A. I. Vol. XLIII. 1913. P. 197.

[5] F. Graebner—Die melanesische Bogenkultur und ihre Verwanderten. *Anthropos*. Band IV. 1919. P. 1009.

[6] P. Rivet—Le Groupe Oceanien.
Bulletin de la Société de Linguistique, Paris. Tome 27 1927. P. 156.

tabelettes, à jeu, boumerang, bâtons de rythme, fronde, and among these the use of bark cloth, suspension bridge, shell-money, musical bow, panpipes, boomerang, finger mutilations, slings, as far as I have been able to trace, are found in India. It should be noted here that I have included here the Andaman and Nicobar Islands and Ceylon also. [7]

Though geology has no direct bearing upon the subject, yet it may not be quite out of place to refer to the similarities of the fauna and flora of earlier geological epochs between India and Africa before we begin to treat of the prehistory of those regions. These similarities have led Mr. R. D. Oldham to think that India was once connected with Africa by land. [8] To quote his own words, [9] "In some deposits found resting upon the Karoo beds on the coast of Natal, 22 out of 35 species of Mollusca and Echinodermata collected and specifically identified, are identical with forms found in cretaceous beds of Southern India, the majority being Trichinopoly species. From the cretaceous rocks of Madagascar, six species of cretaceous fossils were examined by Mr. R. B. Newton in 1899, of which these are also found in Aiyalur group (Southern India). The South African beds are clearly coast or shallow water deposits, like those of India. The great similarity of form suggests continuity of coast line between the two regions, and thus supports the view that the land connection between South Africa and India, already shown to have existed in both the lower and upper Gondwána periods, was continued into cretaceous time". This may serve as a good background for studying the prehistoric times of South India.

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[7] In Flavius Philostratus' Life of Apollonius of Tyara, Book III. Chapter XX, it is stated that Apollonius travelled in India in the first century A. D. where he heard a legend illustrating the fact that "the Ethiopians dwelt in India when Ethiopia as yet was not. Egypt then stretched its border beyond Meroe and included in itself the sources of the Nile. The Ethiopians crossed over to Africa as a result of war." Vide Mr. F. W. H. Migeod's letter to *Man*. (No. 115). October 1924.

[8] I do not think it necessary to enter here into the discussion of the lost submerged continent in the Indian Ocean, termed by Sclater as Lemuria, which is said to have served as a land bridge between India and Africa. We shall have to wait for the conclusion of the Sir John Murray Oceanographical Expedition under the leadership of Lt. Col. Sewell, now in its prepatory stage, before we are in a position to give any final verdict upon this much-discussed problem.

[9] R. D. Oldham—*Manual of the Geology of India*. 2nd Ed. 1893. Quoted in Thurston—*Tribes and Castes of South India*. Madras 1919, Vol. I. P. XXV.

Students of Indian prehistory are well aware that the South-east India, specially the region of Eastern Ghats, is a rich centre of palaeolithic industries. It is gratifying to note that these places, at least five sites, have been studied both stratigraphically and typologically by Mr. L. Cammiade, and in course of his studies,[10] he has been able to trace four types of cultures from the stratigraphical and typological point of view and has correlated them with the climatic succession. Besides the fact that the implements used in the

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[10] L. A. Cammiade—M. C. Burkitt. —Fresh light on the Stone ages in South-east India. *Antiquity*. September, 1930. PP. 327—339.

पुस्तकालय गुरुकुल कांगड़ी विश्वविद्यालय हरिद्वार
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palaeolithic time in both countries are made of quartzite, these scholars have been able to find resemblances between the climatic and industrial succession of S. E. India and and South Africa. We can add here that the minute worked flakes, described by Johnson in South Africa, can easily be compared with those of India and Europe.[11]

We shall now take up the ethnographic comparisons of several cultural traits.

Boomerang

It is a missile weapon, distributed over a very extensive area, from Egypt in Africa through Gujrat, Central and South India, Celebes,[12] Australia, New Hebrides[13], New Zealand[14], North

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[11] Curiously enough, the pigmy implements, collected from the base of the Sand-dunes of Fishook, Cape Colony and studied by Mr. W. J. L. Abbott, appears to be exactly identical "in shape and work" and even in material with those from Australia.

. W. J. Lewis Abbott—Pygmy Implements from Cape Colony. *Man.* (article no. 81). 1913.

[12] (a) Van Höevell—Werphout (boomerang ?) op Zuid-Celebes. *Internationale. Archiv für Ethnographie.* Leyden. Vol. XV, 1902. Pp. 201-202.

(b) P. and F. Sarasin—
Reisen in Celebes ausgeführt in den Jahren, 1893-1896. 1902-03. 2 Vols. 1905. Vol. II. PP. 229-30.

[13] W. H. R. Rivers—The Boomerang in the New Hebrides. *Man.* Article. No. 59. 1915.

[14] H. Hamilton—Boomerang found at Muriwari beach, Auckland. *Journal of the Polynesian Society.* Vol 35. 1926. PP. 45-46

America (Hopi Indian, in Arizona, New Mexico) and even identified in Etruscan vases.[15]

In India we find only two varieties, one simply curved shaped, flat backwards and concave upwards, used by the Kolis of Guzarat and Bhils of Central India and the other crescentic in shape with a knob at one end, used by the Maravans of Madura. The latter has probably been evolved from the former. The former is ordinarily made of wood but the latter type may be constructed either of metal or ivory.

In India, its antiquity is still wrapped up in obscurity. The only reference we get in the classical texts about its use is in Nilkaṇṭha's commentary on the Mahabharata (V. 155.9) where he explains "ṛṣṭi" thus—"Draviḍesu prasiddham hasta ksepyam vakram kâsṭhaphalakam" (a small board, flat and crooked, to be thrown out of the hand, well-known amongst the Draviḍas".[16]

Boomerang is also well-represented in Africa. Not only do we find it used in ancient Egypt but also it is still used by certain tribes of the

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[15] E. Thurston—*Ethnographic Notes in Southern India.*. Madras. 1906, P. 555.

In the opinion of L'Abbé Breuil, traces of boomerang resembling very closely a certain Australian non-returning type can be found in the prehistoric cavepaintings of Europe.

Vide Alcalde Del Rio (H), Breuil (H), et Sierra (R. Père Lorenzo). *Les cavernes de la région Cantabrique* (Espagne). *Peintures et gravures murales des cavernes paléolithiques publiées sous les auspices de S. A. S. le prince Albert* er deMonaco. Monaco. 1912.

Also R. R. Marett's article on Prehistoric Arts and Crafts in Hammerton's Universal History of the World. Vol. I. P. 277.

[16] R. Sewell—Indian Boomerang. *J. R. A. S.* 1898. P. 379.

Nile valley.[17] Sir Samuel Baker is said to have seen a boomerang-like instrument called Trombash used in Abyssinia. Besides the ordinary type, another type, with a knob in one end, was also used in Egypt.[18] The Egyptians also used another type of semi-circular shape[19] which "reproduced in miniature in carnelian or in red jasper, served as an amulet, and was placed on the mummy to furnish the deceased in the other world with a fighting or hunting weapon."

The use of boomerang has been depicted in many ancient tombs in Egypt; and in a tomb at Thebes one can find a representation of hunters throwing boomerang at palmiped.[20] In Maspero's *The Dawn of Civilization*[21], there is a picture drawn by Mr. Faucher-Gudin imitating a painting in the tomb of Khnumhotpû at Beni-Hasan which depicts a man with boomerang in the righthand and the fighting bow in the left. This boomerang, as the picture reveals to us, resembles very closely the one collected from South India by Rao Bahadur L. K. A. Iyer and is now in possession of the Anthropological Museum of the Calcutta University. It should be mentioned here, that the boomerang used by the Bhils of India has close affinities with that practised in N. E. Africa. [22]

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[17] Elísée Reclus—*Géographie Universelle*. Vol IX. P. 352. quoted in Maspero's The Dawn of Civilization. 5th edition. P. 59.

[18] Maspero—The Dawn of Civilization. 5th ed. P. 59.

[19] " ibid, P. 59.

[20] Adrien de Mortillet—article "Boumerang" in *Dictionnaries des Sciences Anthropologique*. Paris. (No Date).

[21] Maspero—loc. cit. P. 57.

It is generally held that the "come-back" boomerang is used only in Australia, though much misinformation gathers around its name today, [23] and not in other countries where the ordinary boomerang is generally used. Pitt-Rivers rejects the idea of its ('come-back' type's) former use in India on account of the heaviness and thickness of the Indian boomerang which, according to him, prevent it from returning to the thrower. But there are some authorites who believe that it was also used in India and Egypt. [24]

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[22] Walker—Indian Boomerang. *Journal and Proceedings of the Asiatic Society of Bengal.* Vol. XX. 1924. No. 3. Article No. 20. P. 205.

[23] It is not used, as is sometimes thought, in throwing at birds etc. but is used as a toy. Writes Dr. Wissler :— "There is much information abroad concerning boomerangs, the general belief being that they return to the thrower ; but the ordinary boomerang, the one used as a weapon, does not return ...... So far as we could learn, those of the returnable type are used mainly as toys, because their movements are too uncertain to be depended upon to hit where they are aimed..." Dr. Wissler further writes that when he "wished to see one, the whole camp was ransacked, only to produce two small, poorly made examples, not at all comparable to the handsome, efficient-looking boomerang, thrust under the belts of the man."

Clark Wissler—Among the "Blacks" of Western Australia. *Scientific American*, September, 1928. P. 202.

[24] *Encyclopaedia Britannica.* (*14th edition*). Article. 'Boomerang.' The use of boomerang, being unknown to the Indo-Aryans, probably gave rise, as Mons. Przyluski thinks, to the fable of an arrow returning to the quiver after striking the enemy. This indirectly proves the use of 'returning boomerang's in India.

The survival of the boomerang can easily be traced in places where it was once used. The throwing knife in Africa and some types of sword used in many segregated places in India where no boomerang is used now, tell a tale of their earlier use in those places. Pitt-Rivers has enumerated several examples of these in Africa, [25] showing how a wooden instrument used by the Djiba Negroes and a Nubian sword closely resemble the boomerang found in Egypt and Australia. As to the latter, it is not known whether it is thrown or not though it resembles a boomerang so far as its shape is concerned. In India though we have not known any instances of throwing knife, yet so far as its shape is concerned, we can cite several examples which resemble the boomerang. I have seen three swords in the Ethnographical collections of the Indian Museum, collected from Mussorie (No. 11018), from Balasore (No. 452), from Yradabad (No. 5553), which, if placed side by side with a boomerang, show how closely they resemble one another. It should be noted here, that an iron implement used by the natives of Central Africa for the purpose of throwing which, as Pitt-Rivers thinks, closely resemble the boomerang, reminds us of a certain type of Dao used in Bengal.

To add a further instance, it may be noted that the Koorkee or Gurkha knife which is identical in shape with boomerang, was said to have been once thrown, though it now serves the purpose of an ordinary dagger. Moreover, we would like to note that the sacrificial knife used by the Khasis of Assam, [26] and the swords used by the Lakhers, [27] (Assam) and in Burma, [28] also bear resemblance to the boomerang. What I venture to point out here is that the curved sword or similar weapons are the replicas of the once used boomerang in those places.

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[25] Pitt-Rivers—Evolution of Culture. P. 128.

It has been pointed out by Pitt-Rivers that the steel-made boomerang used in the Madras Presidency has probably led "to the use of the steel chakra or war quoit". Curiously enough, Pitt-Rivers has found an almost similar weapon used by the Djiba Negroes of Central Africa as a bracelet". It is [29] made of "iron, sharp on the outside and blunt on the inside, which touches the arm; the edge is usually covered with a strip of hide to prevent injury to the person".

It is one of the few implements whose centre of dispersal is yet an unsolved problem in anthropology. Whether it was evolved independently in every place (since it is doubtful how can it be diffused to a far-off country like Australia on the one hand, and Egypt on the other, from ond common centre when vast oceans divide the countries), or whether it was evolved only once and in one place and from there spread throughout the world, is a problem still wrapped up in deep obscurity. The probable centre of dispersal is, in my opinion, India which is centrally situated between Africa on the one hand and Australia on the other and which has not only the earlier forms but later types of boomerang with knobs as also subsequent series of bent throwing knives and long bent sword which could have evolved from it.

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[26] Dr. C. Becker—Die Nongkrem-Puja in den Khasi-Bergen, Assam. *Anthropos*, Band. IV. 1909 plate facing page. 897.

[27] Parry—The Lakhers. P. 47. (illustration) No. 4.

[28] Handbook to the Ethnographical Collection of the British Museum. Fig. 44 C. P. 49.

[29] Pitt-Rivers—op. cit. P. 127.

The case for Egypt is weak since, as has been pointed out by Prof. P. Rivet,[30] she got this through the intermediary of certain nomadic people living in the Arabic desert who, it is stated, received it from Sumer,[31] where it might have reached ultimately from India.

According to modern cultural theories, almost every type of the traits must be present in the centre; but in Australia, we do not find the knobbed type, nor the throwing knife or long bent sword. It is, therefore, probable that it migrated from India[32]. But what is the route? It is a well-known fact that this implement has been found in India only in the Pre-Dravidian area. Now in the extreme east of India among the Khasis the surival of the boomerang can be found, as we have shown already, in a certain type of sword. There is a strong dolicho-ptatyrrhine type (i. e. Pre-Dravidian) [33] among them. So from this corner it might have gradually spread south and eastwards. [34]

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[30] P. Rivet—op. cit.

[31] vide James. B. Nies—The Boomerang in Ancient Babylonia. *American Anthropologist* Vol. XVI. 1914. PP. 23-32.

[32] Pitt-Rivers has come nearly to the same conclusion. He says:— "It may with great possibility be regarded as one of these weapons which primeval man carried with them into distant parts from the home of their ancestors, wherever it was,—possibly some continent in the Indian Ocean now submerged". On the Egyptian Boomerang and its Affinities. J. A. 1. Vol: 12. 1883. P. 462. Balfour also believes that it was "in all probability brought there with the earliest immigrants from the Asiatic Continent". Quoted in E. Thurston's *Ethnographic Notes*......, P. 555.

The discovery of boomerang in Celebes, where live tribes racially analogous to the Pre-Dravidians, lends support to this theory. Moreover, it might be pointed out, that the skulls discovered at the neolithic bed of Lang-Cûom as well as the Wadjak skull show that Australia included at that time certain parts of Malaysia and Indo-China. [35]

Prof. Rivet has said truly about the Australian migration. "Encore qu'on ne puisse donner aucune preuve à ce sujet, il est vraisemblable que sa migration s'est faite du nord vers le sud, c'est-à-dire de la Malaisie et de l'Asie méridionale vers l'Australie et non en sens inverse".[36]

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[33] A. C. Haddon—Races of Man. 1924. P. 116. Prof. Dixon has also admitted this in his article, "*Khasis in Assam*"—*Man in India.* Vol. II. 1922.

[34] An intensive search among Palong, Wa and neighbouring Austro-Asiatic tribes may lead to some accidental discoveries of the boomerang in such a manner as Dr. Hutton found traces of blow-gun among the Thado Kukis. cf. *Man.* article no. 77. 1924.

[35] H. Mansuy et (Mlle) Colani—Contribution à l'étude *de la* préhistorique *de* l'Indochine VII.

Néolithique inférieur (Bacsonien) et néolithique supérieur dans-le haut-Tonkin (*derniéres recherches*) avec la description des crânes do gisement de *Lang-Cuom. Mémoires du Service géolo. gique de l' IndoChine.* Quoted in Rivet—Le Groupe Oceanien. P. 152-3. It is interesting to note here that the recently discovered Nagangdong Skull in Java has affinity with the Talgai Skulls found in Australia on the one hand, and with the Broken Hill, *or* Rhodesian, skull (Africa) on the other. Vide Wm. Oppenoorth:—SoloMan—A New Fossil Skull. *Scientific American.* September 1932. P. 154., also Dubois— Early Man in Java, in "*Nature*" July, 2. 1932. P. 20.

Simple bow and Cross bow.

In studying the bows and arrows, with a view to find out any affinities between these two countries one is faced with immense difficulties. It is chiefly due to the efforts of Ratzel, Leakey and other anthropologists that we have a detailed and systematic study of the bows and arrows of Africa; but in India, no classification, uptill now is available so that it will not be possible for us to go into a deeper analysis of the problem involved. There must be a 'post-mortem examination', to adopt the language of Mr. Henry Balfour, of every type of bows available in India; and the study of cross-sections alone would enable us to say in what respect it bears similarity to others.

But inspite of this desideratum, we find here and there references by well-known scholars which help us to a certain extent in studying this problem.

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[36] Rivet—*op, cit*, P. 154.

Prof. Elliot Smith, in his map on the areas of Characterization of the Nordic, Alpine, Mongol and Negro races, suggested the centre of dispersal of the Australian in South India. (Smith-Human History. Fig. 29. P. III). Mr. Hornell has brought forward another point in favour of the theory that the Proto-Australian migrated from India. He says "A somewhat similar case is that of one form of Australian sea-raft which may be of common origin with the Catamarans in use on the Coromandel coast of India. The latter craft are highly specialized and removed entirely from the category of simple rafts which are devices common to all races; similarly some of the Australian "sea-rafts" show enough specialization to make them worthy of inclusion in the same class as the Indian Catamaran".

James Hornell—The Origin and Ethnological Significances of Indian Boat-design.

Memoirs of the Asiatic Society of Bengal. 1920. P. 229.

The drawing of bows in the cave paintings of Europe and Africa, proves its extreme antiquity; and up to the present time, it is almost everywhere used except by the Australians and the Tasmanians (now extinct). Now, considering the type of African bow which resembles the Indian, the first thing which attracts our attention is the simple bent form.[37] Besides this, Mr. Leakey has found a type of bow in Africa which bears an extraordinary similarity to the Andamanese bow.[38] But as this resemblance, in his opinion, is superficial, he thinks that some ceremonial significance might account for its origin there. It is interesting to note here that the harpoon arrow for shooting pigs in the Andaman Islands, resembles closely the harpoon for shooting hippopotamus used by the Mobenge tribe of Ababwa, Welle, in Belgian Congo.[39] Moreover, the bows with knobs and strings of rattan which are now-a-days used in Africa, are found in New Guinea also.[40] This, however, presents us with further difficulty in solving the problem. Whether these are the outcome of a mere accidental coincidence or "of a common origin" as has been pointed out by Ratzel, can not be said now.

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[37] Ratzel—op, cit. P. 251.

[38] L. S. B. Leakey—A New Classification of Bow and Arrow in Africa. *J. R. A. I.* Vol. LVI. 1926. P. 270.

[39] *Handbook to the Ethnographical Collection of the British Museum.* 2nd. Ed. 1925. Page 195. fig. 176. No. 6.

The cross bow is used in Assam (among the Kachins, Karens, Nagas, Abors), Burma,[41] Malabar, Nicobar Islands, and by certain tribes ot Indo-China. It seems to be of Mongolian origin[42] and its use among the Fans and Toruba of West Africa and the Southern Ba-Mbla as a toy[43] presents us with a peculiar interest in so far as it is found only among these tribes of that vast continent. Although the method of construction and of releasing the string differs from that employed in other places, this has been brought to Africa in the sixteenth centuries by the Portugese probably from Malabar (India).

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[40] Not only do we find resemblances in arts and crafts, but some scholars have gone further, and found resemblances even in physical characters with the peoples of Oceania. Sir H. H. Johnston has shown that the open-toed aspect of the short feet of the Bushmen are found in "an exaggerated form in the Oceanic Negroes and the New-Guinea Negroes".

Johnston—A Survey of the Ethnography of Africa; and the fomal racial and tribal migration in that continent. *J. R. A. I.* 1913. P. 379.

Morever, the steatopygy which uptil now thought to be a Bushmen and Hottentot characteristics though it has been found in Europe, is "occasionally observably among the Oceanic Negroes". His conclusion, it is stated, is based on observations of several German Scholars, but it is to be regretted that Sir H. H. Johnston has not mentioned his authorities. (loc. cit. P. 379)

[41] In his recent expedetion to Upper Burma, Captain F. Kingdon-Ward has found a pigmy tribe named Darus, living in "the unknown triangle", in the extreme north of Burma, who use "a primitive cross-bow" for hunting. vide *The Illustrated London News.* May, 7. 1932. Also his article "Explorations on the Burma-Tibet Frontier" in the *Geographical Journal,* December 1932. Vol. LXXX, No. 6.

[42] J. H. Hutton—Races of Further Asia. *Man in India.* Vol. XII, No. I. Jan—March. 1932. P. 9.

[43] Torday and Joyce—Notes on Southern Ba-Mbla. *Man.* Article No. 52. 1907.

Fire-Drill.

Except the Andaman Islanders there is no other community in the Indian Empire reported to be ignorant of the art of making fire. The making of fire by drilling is common to India and Africa, though this method is practised by the Tasmananians, Australians, Papuans, and many other tribes of America. In ancient times, the Brāhman priests of India used to make the sacrificial fire by means of drilling. In the present day, this method is practised by the Veddhas of Ceylon, Chenchus, [44] Yanadis, [45] Kotas, [46] in Southern India and some tribes of the Chota-Nagpur area. It is also employed for the sacrificial fire by the Todas and the Nicobarese. In Africa, there are many tribes who use this method, the Bushmen being notable among them. The Makalangas also produce fire by rubbing two sticks [47].

Habitations.

Dr. Ankermann, in his map on the habitations of Africa,[48] has shown the distribution of the three types of huts in Africa, which are, as follows: 1) Huts with rectangular base and gabled roofs, 2) Beehive shaped huts, and (3) Huts with cylindrical base and conical roofs, Among these, the first is confined to the west, the second occurs in the west and in the Italian Somaliland, and the third is restricted to an area from senegal to Sudan and South-eastern part of Africa with "occasional overlapping". In addition to these, we may mention another type, though less frequently distributed in Africa, namely, pile dwellings.

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[44] Thurston—op, cit. Vol II, P. 43.

[45] ” — ” Vol VII, P. 417.

[46] ” — ” Vol III, P. 11.

[46] T. Bent —The Ruined Cities of Mashonaland. Being a record of excavation and exploration in 1891. London, 1896. P. 54.

[48] Ankermann—Kulturkreise und Kulturschichten in Afrika. *Zeitschrift für Ethnologie*. Berlin. Vol. XXXVII, 1905. P, 56.

Now, India inspite of her assimilating too many cultures, has retained several primitive characteristics through which she had passed, side by side with the superior civilization which is so highly spoken of by the Western scholars. Though rectangular huts are generally constructed throughout the length and breadth of India, no matter whether they have gabled roof or for that matter, replaced now-a-days by tin, yet I may point out that the other two types of hut which are thought to be of distinctly African characteristics, have also been found in India. The rectangular habitations with several rooms are found as far east as in the peripheral zones of Polynesia. As for conical huts, it can be said that Yanadis, a Pre-Dravidian tribe living in the forests of South India, construct "low conical huts" for dwelling, which is made of "bamboo and palmyra leaves, grass or millet stalks, with a small entrance, through which grown-up people have to creep".[49] The Todas of

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[49] Thurston—*op. cit.*

Nilgiri Hills also, construct for their dairies a type of hut which has "a conical roof, drawn into a sort of spire" and their temple of Boa lends us further support.[50] I would like to add further that though the Sakai of Malay Peninsula usually construct the rectangular dwelling place, they also sometimes build a conical type of hut.[51] Whenever I think of these conical huts, I am always struck by the similarity of their structure, specially in the conical roof, with the *Marai*, or 'granary' house in Bengal.

The beehive huts are found among the Chenchus[52] and the Nicobarese,[53] but, in the latter case, it is rested on poles. Now, the houses on posts on dryland, if properly distributed on maps, show that its area of distribution are the Malay Peninsula, Polynesia, Assam and Africa also. It is interesting to note in this connection that fencing which has now become a part and parcel of the Indian habitation is also a characteristic feature of the African and Polynesian dwelling place.[54]

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[50] G. Oppert—Ueber die Toda and Kota in den Nilagiri oder den blauen Bergen. vide fig 2. *Zeitscrift für Ethnologie*. 1896.

He says about Boa temple :—

„die Boa ähnelt einem zuckerhut. Es existtiren nur noch vier Boa in den Nilagiri, die für nicht so heilig gelten, weil ihr Priester ein Vartal, also ein Priester zweiten Ranges, ist. *Sie gehörten Vielleicht Ursprünglich gar nicht den Toda, sondern anderen Rasse.* " P. 219.

[51] A. H. Keane— Man, *Past and Present.* Rev. and largely rewritten by A. H. Quiggin and A. C. Haddon. Cambridge. 1920. P. 425.

[52] Thurston—*op. cit.* Vol. II. P. 38.

[53] Its model has been preserved in the Ethnographical Gallery of the Indian Museum. (Calcutta)

Simple Musical Bow.

It is due to the researches of scholars like Kunst, Sachs, Balfour, and Miss Helen Roberts, that we are able to trace the distribution and migration of musical instruments. Miss Roberts, in her book "Ancient Hawaiian Music", has noted that Polynesian music, both vocal and instrumental, as well as dancing are highly saturated with the Indian styles. She has gone so far as to admit that the simple musical bow, which is thought to have originated from the ordinary bow,[55] might have originated "in Ceylon or India"[56] whence it spread westwards and eastwards, making Africa, Melanesia, Polynesia and the western Hemisphere the marginal areas.[57] It should be noted further that in a brief note to the *Institut Francais*

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[54] Otis Mason—Origin of Invention. P. 196.

[55] Meerwarth writes :—

"Even now, e. g. (among the Nayars of Cochin and Travancore) the bow is used for musical purposes. References to the sound of the twanging bow-string are frequent in the epics of all nations. Thus emphasis is laid on the terrible sound of Apollo's bow, when he killed the Greeks to avenge his priest."

Dr. A. M. Meerwarth—*A Guide to the Collection of Musical Instruments...in the Indian Museum.* 1917. P. 3-4.

The Ramayana and the Mahabharata, the two great Indian epics, it should be noted, contain many references of an exactly similar nature.

[56] Miss H. Roberts—*Ancient Hawaiian Music.* P. 343.

[57] It is hoped that the bas-reliefs of Borobudur in Java, might give us certain clues about the resemblance between the musical instruments of India and Java, and, for that matter, Indonesia. We all know that Indian emigrants started colonies in Indo-China and Indonesia during 8th and 9th century A. D.

d'Anthropologie (Paris)[58] M. Jules Bloch described a musical instrument used by the Savaras of the district of Ganjam (Madras Presidency), South India. This instrument, which has been termed by Sachs as raft-shaped zithar *(Floss zither)*, bears a close affinity to the similar types collected from upper Volta, Togo, and upper Congo.[59]

String Figures.

The study of string figures was formerly much undervalued by ethnologists, but, at the present time, thanks to the efforts of Drs Haddon and Rivers, it has been scientifically approached with the result we have now their technical nomenclatune, though, I believe, much has still to be done for the "elucidation of relationships and migrations". Mr. Hornell, in his recently published monograph entitled "String figures from Gujrat and Kathiawar" (a) has enumerated several string figures among which "nine are common to India and Africa". These are as follows :— (1) Saw I (West Africa), (2) Saw V (Zanzibar), (3) Knot I (Uganda and Sierra Leone) (4) Knot II (West Africa (5) Peacock's foot (West Africa) (6) Unnamed (West Africa and Polynesia) (7) The hand (Central and West Africa) (8) At Jali (West Africa) (a) Machhi Jal (West Africa)

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[58] Vide *Report of the Institut Francais d'Anthropologie,* in *L'Anthropologie.* Tome XLII. Nos. 1-2. P. 236.

[59] Vide *Report of the Institut Francais d'Anthropologie* in *L'Anthropologie.* Tome XLII Nos. 5-6. PP. 677-78.

a) James Hornell—*String Figures from Gujrat and Kathiawar Memoirs of the Asiatic Society of Bengal.*. Vol XI. No. 4. PP. 147-164. Calcutta. 1932.

(b) Thus Hornell says (c) "The common possessio of so large a proportion of these games emphasises how intimate and long-standing has been the connection of Indians with Africa, and in particular that of trades and sailors belonging to the pools of Gujrat and Kathiawar with East Africa, a trade that reaches back fully two thousand years. Such age-long contact of Indians with Negro tribes and of Arab sailors with Negro peoples on the one side and with Indian coast-dwellers on the other has undoubtedly been the main factor in the remarkable community of strings games". (d)

The 'Sati' rite.

It is curious to know that besides India, the classical land of the 'Sati' rite, its traces have been found in America [60] and in ancient Egypt. In the report[61] of the excavations at Kerma, once an Egyptian colony, done under the auspices of the Joint Egyptian Expedition of Harvard Universitty and Boston Museum of Fine Arts,

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b) James Hornell— op. cit. P. 149.

c) " — op. cit. P. 147.

d) It is to be noted here that the "Isafuba," "the mysterious game of the Makalangas, with sixty holes in rows in the ground" offers a close parallel to a game known as *Pullanogooly* of India. T. Bent—op. cit, PP. 85-86.

[60] Macleod—Distribution and Process of Sutte in North America. *American Anthropologist.* Vol. 33; for other instances, vide J. J. Modi's article entitled "*Antiquity of the Custom of Sutte*" in "*Man in India*", Vol. IV, Nos. 1-2. 1924. PP. 128-29. (no. 15).

[61] George A. Reisner—Excavations at Kerma. (Harvard African Studies. Vol. V, VI). Peabody Museum of Harvard University. Camb. Mass. 1923.

The reference here is taken from a review of this monograph in the *American Anthropologist.* 1924. P. 102-104.

Dr. Reisner has described a burial custom of the XIIth dynasty which bears testimony to the sacrifice of wives—a practice known in ancient Egypt and in many places in Africa to-day. The conclusion which he has reached after a detailed examination, is that the wives died "voluntarily, by the compulsion of traditional duty, the death of suffocation by burial under earth." It has also been pointed out by Dr. Reisner, that "in the tombs of Dynasty XVIII, there is the new and curious rite called Tekenuw, which appears to relate the *sati*-burial custom."

Banana, Taro, Lotus,

If the zoologists and botanists investigate in co-operation with the anthropologists in finding out the original home of our common domesticated plants and animals, then the result of such investigation will bring forth some interesting facts concerning "early migrations of man". In this connection Prof. P. E. Newberry has raised several important questions in the Liverpool meeting (1923) of the British Association for the Cultivation of Science, but we shall restrical ourselves at present only to the banana and taro.

It is an obvious fact, as Newberry observes that the probable home of a plant will be in that place where it grows wildly. [62]

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[62] P. E. Newberry—Discussion on the Origin of Domesticated Animals and Plants.
Report of the Liverpool Meeting (1923) of the British Association for the Advancement of Science. P. 374.

Now, banana is said to have grown wild in India in the forests of Chittagong (according to Roxburg) and in the Khasia hills (according to Hooker and Thomson). Morever, we read in the selected papers from the Kew Bulletin II—*Principal Varieties of Musa*, London, 1906).[63]—"There is no circumstance in the structure of any of the states of the banana or plantain cultivated in India to prevent their being considered as being varieties of one and the same species, namely, *musa sapientum*; that their reduction to a single species is even confirmed by the multitude of varieties that exist; by nearly the whole of these varieties being destitute of seeds; and the existence of a plant indigenous to the continent of India producing perfect seeds; from which, therefore, all of them may be supposed to have sprung. The Peruvians had two cultivated varieties of the banana which plant was unknown in the West Indies and Putland suggested that the Polynesians introduced the banana to America."

It has been pointed out further by H. H. Johnston[64] that the cultivated banana was introduced, at first, into East Africa by the Arabs whence it spread throughout the continent. Stuhlmann believes that banana was introduced into Africa by the Negritos probably in the Pluvial age, which may be correlated with the Ice Age of Europe.[65]

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[63] Quoted in Dr. P. Mitra's article, Cultural Affinities between India and Polynesia. *Man in India.* Vol. XI, 1931, PP. 240-241.

[64] Sir H. H. Johnston—*op. cit.* P. 317.
He says further—"Banana may even have been brought by Malay canoes across the Indian Ocean to Madagascar and the Comoro Islands. The earlier Arab writers on East Africa between the 10th and 13th centuries mention both Lamu on the North Zanzian coast and the Comoro Islands as special centres of banana cultivation." ibid, P. 317.

Taro.

Taro is grown wild in India but its cultivation is widely distributed; and, according to Rivers,[66] it has probably been diffused throughout the world from India. He says "Botanists are agreed that the original home of the plant is Southern Asia, probably India, and the great variety of the native names for the plant in India shows that its importance in this country goes back to a remote date. If India is the original home of *taro*, its economic utility would have been acquired (by the megalithic people) and, together with the plant itself, taken thence to Egypt (where, according to Reinhardt, it was known as early as 500 B. C.), Arabia and eastern Mediterranean.[67] It may be pointed out that de Candolle also thinks that "the Egyptian cultivated Colocasias came from India".

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[65] Stuhlmann—Handwerk und Industrie in Ostafrika. Hamburg. 1910. Quoted in Max Schmidt—*Primitive Races of Mankind.* (tr. by Mr. A. K. Dallas) London. 1926. P. 288.

[66] W. H. R. Rivers—*Psychology and Ethnology*, London, 1926, PP. 262-287.

[67] Rivers — ibid. P. 273.

Lotus.

Among articles of food which are common to Egypt and India, the lotus stands prominent. As in India, the Egyptians were accustomed to take as their food the three kinds of lotus (*Nelumbium Speciosum* and two *Nymphoeas*).[68] Moreover, the practice of sowing the seed of this plant, by "rolling them up in a ball of clay", is exactly similar in these two conntries.

Peach.

Peach, which is said to have been introduced from Persia, "has been supposed by different botanists to be either *Balanities aegyptiaca*, or *Cordia Myoa*, both of which are of Indian origin".[69]

Sir J. H. Johnston thinks that hemp, rice, sugar cane, cotton plant have been introduced into Africa from Asia by the Arabs, the latter being unknown in Egypt in early times since it was never found in tombs.[70]

These are not all, Schweinfurth,[71] it should be noted, has observed common weeds of undoubtedly Indian origin, in "the wide stretch of country between Tondy and Dyoor". It has been pointed out by some scholars that the early African traders are responsible for the introduction of the African Baobab (*Adansonia digitata*) in the Tinnevelley district of the Madras Presidency.

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[68] Royle—*Essay on the Antiquity of Hindu Medicine.* London, 1837. P. 128.

[69] „ — ibid, P. 129.

[70] Sir J. H. Johnston—*op. cit.* P. 397.

[71] P. E. Newberry—*op. cit.* P. 474.

(South India). Some have asserted also that it had been introduced at a much later time, "probabaly with the African Mahommedans or with the Portugese".[72]

Domesticated fowl.

Domesticated fowl which is now regarded as food, is also the main offering in certain rituals and sacrifices from Chōṭā Nāgpur, East Bengal, Assam, Burma to the Pacific regions. It originated, as has been accepted by Darwin, somewhere in South-eastern Asia, where alone the 'combed-chickens' are found in a wild state, whence it gradually spread throughout the world. Again, as Johnston points out, it might have been brought to East Africa and Madagascar from Persia or India by the Arabs.

Cattle.

Africa has been divided into several cultural areas by Mr. Herskovits[73] among which East African Cattle area is by far the largest. In it, culture "is basically agricultural with a cattle culture super-imposed upon it". These parts, as Ratzel observes,[74] falls within the area of the distribution of the Indian Ox which is domesticated by Masai, Nandi, Schilluk, Dinka, and several south eastern Nilotes. This type of Indian Ox *(Bos indicus)* appears to be very old since it was found in large number at Mohen-jo-daro and Harappa. It can still be found in Sind, Northern Gujrat and Rajputana. As this type was not found in Egypt until the Eighteenth dynasty (Circa 1580-1322 B. C.) it would not be hazardons to suppose that it found its way into Egypt ultimately from India [75] perhaps *via* Anau, Susa and Mesopotamia. Ultimately they might have been descended from the older *Bos namadicus, as Duerst observes,* with whom probably the Anau, Indus Valley, and Swiss lake dwelling cattle have a filiation in the course of long descent and local cross.

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[72] H. G. Rawlinson—*Intercourse between India and the Western World, from the Earliest times to the Fall of Rome.* Cambridge. 1916. P. 14.

A kind of *Sherbet* is prepared, both in India and Africa, from its fruit. (ibid, P. 14).

[73] M. J. Herskovits—*A Preliminary Consideration of the Culture Areas of Africa. American Anthropologist.* 1924. P. 56.

[74] Ratzel says,—

"Africa falls in great part within the limits of the distribution of iron, of the Indian Ox, and pig, of the domestic fowl. The iron industry of Southern Asia and the cattle breeding of India are prominent points in African ethnography".
Ratzel—op. cit. Vol. II. P. 250.

Smelting of Iron.

Prof. William Gowland, the well-known authority on metallurgy, has opined that the smelting of irom "may have been hit upon by accident while experiments were being made. This lucky accident may well have happened in India, where the iron industry is one of great antiquity (far greater indeed than in Europe, e, g, at Hallstatt or La Tène). and iron ores occur so largely" [76] Iron ores, it should be noted, are very widely distributed in India and from very early times the chief centres of working in India are in the N. W. Provinces, Central India, Western Ghats, Mysore, Haiderabad, Kutch, and so on.[77] Its high antiquity in India is unquestionable since it has been probably mentioned in the Rigveda as "*ayas*". Besides this, there are numerous evidences of extraction in South India as early as 10th century B. C. or even much earlier as it is found associated with neoliths and dolmens.

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[75] Ernest Mackay—"Figurines and Model animals" in Marshall's *Mohen-jo-daro and the Indus Civilization.* London, 1931. Vol I. Chapter XVIII. P. 347. It is very interesting to note here that a *giraffe*-like animal has been identified in the Konarak temples as well as in the cave paintings from Hoshangabad District of Central Provinces. Vide *Annual Report of Arch. Surv of India.* 1917—18 Part I. P. 25.

[76] Quoted in Bruce Foote's—*Indian Prehistoric and Proto-historic Antiquities,* P, 25,

Now, turning our attention to Africa, we find the practice of extracting iron from its ores prevalent in ancient Egypt which bears testimony to its antiquity in Africa. As to the the technique of smelting, it should be admitted that the primitive form of furnace consisting of "a shaft or tough of clay with holes for the introduction of the blast is still used in Africa, India, Borneo, Japan and Catalonia (Spain) and Finland." Moreover, as has been pointed out by Stuhlmann and Kollmann,[78] the natives of Africa near Victoria Nyanza, first of all, simply mix the powdered ore with charcoal and then obtain the metal by introduction of air currents. Let us compare this with the description given by Dr. Buchanan in his "Travels in South India"[79] about the products of wrought iron from the ores and it will be at once revealed how closely the process of the two countries resemble each other.

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[77] Wm. Gowland—*Metals in Antiquity*. *J. R. A. I.* Vol. XLII, (1912).

[78] Vide E. Torday—Appendix to Sir J. H. Johnston's *A Survey of the Ethnography of Africa op. cit.* P. 414.

[79] Quoted in G. B. Philips—*The Claims of India for the Early Production of Iron. American Anthropologist* 1924. PP. 351-352.

He says:—"In the hills of Malabar are found veins and beds of black oxide of iron, mixed with clay and sand. This impure ore is dug out, broken up into small pieces, washed to free it from its impurities and render it fit for reduction. The furnace consists of a mound of clay 7 ft. wide and 4 or 5 feet long, an excavation or pit made in the clay 3 ft. wide and 2 feet deep to hold the charge of ore and fuel, and a hole provided at one side to allow the slag or vitrified matter to run off and a clay chimney placed on top.

"The bottom of the furnace is filled to the vent for the slag with a bedding off sand and charcoal well beaten together, and a row of 8 or 10 pipes of clay with ends projecting inside over the hearth, through which a blast of air is forced by a bellows. The furnace is then filled with charcoal and ignited and the air blown in and a change of the prepared ore thrown in weighing 2160 lbs. and 20 baskets full more of charcoal added gradually as the fuel burns away. The operation lasts 24 hours, two sets of men work the bellows and keep a continuous blast..... ". It may be pointed out further that the Egyptian treadle-blasts processes are identical with those practised by the Pre-Dravidian tribes of Chōṭā-Nāgpur.[80]

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[80] F. von Luschan—*Eisentechnik in Afrika. Zeitschrift für Ethnologie.* 1909. fig 7.

It is interesting to note in this connection that some scholars suspect that the iron from which the little steel dagger, found in the tomb of Tutankh-amen, was made, came from Hyderabad (Deccan) inasmuch as the metal of the famous Damascus Sword was imported from Kona Samundram near Nirma in Hyderabad (Deccan).

Loom.

Mr. H. Ling Roth,[81] in course of his studies on the primitive looms, came across six types of loom in Africa which are as follows :—

i) Vertical mat loom, ii) Horizontal fixed Heddle loom, iii) Vertical Cotton loom, iv) Horizontal Narrow Band loom, v) Pit Treadle loom, vi) The Mediterranean Loom. Among these, at present, the Pit Treadle loom demands our special attention in so far as it is not indigenous there, and, thus, has been probably borrowed from India where it is very common. Mr. Roth thinks that it was probably introduced into Africa from India through Arabia where it is largely used in the district of Oman. In Africa, this type of loom is prevalent mainly among Gallas and other neighbouring tribes. Ratzel tells us only that it (loom) is "essentially the same on both sidés of the Indian Ocean".[82]

Bark Cloth.

Nothing definite can be said about any relations between these two countries in regard to garments, except the one which is made of bark. It is very widely distributed, extending, according to Ankermann,[83] from the west coast of Africa down to the extreme east of Polynesia. While in Africa, its use is found to be restricted to the area, from the Gulf of Guinea to as far as

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[81] H. Ling Roth—*Studies in Primitive Looms. J. R. A. I.* Vol. XLVII. (1917).
It is interesting to note here that tie-dyeing which has probably been originated in India is also practised in Africa.

[82] Ratzel— op. cit. P. 250.

[83] Vide, the distribution map of garments in Africa, in Ankermann's article—*op. cit.* P. 62.

Madagascar, it is now-a-days used in India only by the Veddahs of Ceylon and the Nicobarese. But the epics and similar other sacred books of the Hindus are abundant with examples of its use by the sages in ancient India. The material, as Ratzel thinks, is "probably, as in Africa, the the bark of species of *ficus*" [84]

Ornament.

In east and west Africa, it is the practice to wear brass or copper rings as ornament in the forearm and lower part of thigh, sometimes one above the other and often in a connected spiral. These sort of ornaments, in the opinion of Ratzel, [85] are found to be used by the tribes living in the forests of South India.

Tooth Mutilations.

In India, the practice of chipping the incisor teeth is only confined to the Kadars and Mala Vadan of South India. This custom is prevalent in Africa among the Masai, Akamba, MaNganja, Ajwa, ATonga, MaKalanga, Herero, and several negro tribes of the west. [86] Several Australians, New Guinea and Indonesian tribes, it is stated, practise it and Skeat and Blagden recorded the practice of filing the teeth by the Jakuns of the Malay Peninsula. [87] It is curious to note that this practice appears to be everywhere connected with the initiation ceremony. It should be noted further that Profs. Douglas Derry and Elliot-Smith have recorded the finding of a skeleton of a negro in a Ptolemaic-Roman Cemetry near Dakka in Lower Nubia in which "all the teeth in both jaws had been horizontally filed on the labial aspect. In addition, the upper two central incisors had had their edges rubbed down and filed to assume a semi-lunar form". And in the much-discussed Oldoway skull, there are also certain indications of filing the teeth. [88]

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[84] Ratzel— *op. cit*, Vol. I. P. 96-97.

[85] Ratzel— *op. cit.* P. 250.

[86] *Handbook to the Ethnographical Collections of the British Museum.* 1925. PP. 216, 220, 230, 240.

[87] Thurston— *op. cit.* P. XXI.

Finger mutilations.

It is a very old custom, since there are numerous evidences of its practice in the cave paintings in Spain and France in the Aurignacian and Magdalenian times. We shall not enter, at present, into a discussion as to its motives, but it may be pointed out that its distribution ranges over vast regions, including Africa, South India, and Oceania. The little finger is generally preferred for the sake of mutilations. Curiously enough, there is a practice prevalent in South India which required the grand-mothers (in some cases) "to cut off one joint for each grandson born to them".[89] It may be worthy of note that the Mahābhārata tradition by which the sacrifice of a finger (thumb) was demanded by the military teacher Dronāchārja from his unofficial pupil Ekalabya, might refer to some customary offering of such a finger to superior beings.

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[88] Elliot Smiths' letter to *Man*. [239] August 1932. The chipping of the incisor teeth has also been found in the crania discovered in the Grotto of Afalou Bou Rhummel (Algeria) as well as in the recently-discovered Asselar Skull.

[89] *Encyclopaedia Britannica* (14th Edition) Article "*Mutilations and Deformations.*"

Float.

"In the region of Lake Chad (Africa), float are made by attaching two large empty calabashe to the two ends of a stout stick; the native sit astride the stick and paddles with his hands. With this may be compared the float—almost a raft- of North Arcot (India) in which two inverte pots are joined by two parallel bamboo rods, on which a man sits and paddles".[90]

Fishing traps.

Sea fishing with basket traps is confined, as has been pointed out by Hornell, to the shores of the Gulf of Manner and the Bay. The simplest form of the trap is "sub-triangular or rather cordate in outline, with a single funnel-shaped opening in the centre of one side, which is to receive it".[91] This type of trap, which, accordin to Hornell, is of Indian origin, is found in Zanzibar (Africa) and Brazil.[92] But, it should b noted, that this has been introduced into thes places through the intermediary of Portugese.

Beads.

Mr. Beck, in his article on beads collecte from Kuala Selinsing, Malay-Federated State lays great stress on their resemblances to tho from South India, Zanzibar and even Zimbabw

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[90] A Handbook to the Cases Illustrating Simple Means of Travel a Transport by Land and Water. (The Horniman Museum a Library.) 1925. P. 31.

[91] James Hornell—*Marine Fish-traps in South India and Bra Man.* Article no. 41. April, 1924.

[92] W. H. Ingrams—*Marine Fish-traps in Zanzibar, Pemba, So India, Brazil. Man.* no. 99. September 1924.

It might have been pointed out that certain opaque red beads made of copper glass are "identical with beads found in South India and South Africa".[93]

Megaliths.

In the recent International Congress of Prehistoric and Proto-historic sciences, Dr. E. H. Hunt read a paper about the megalithic burials in the Deccan (Hyderabad State) in which he has drawn several analogies with Egypt which include "house-of-cards" cist construction, polished black and red pots, lapis lazuli and the "ka" mark."[94]

Language.

Coming now to language, it may be pointed out that there are certain languages in Africa which are still baffling the philologists as to why they resemble so closely the Dravidian languages of India. One of them is Bornu or Kanuri, spoken in the Bornu country, in Central Africa.[95] There are some French ethnologists who believe that the original language of the White colonists of North Africa has some resemblance, however faint it may be, with the Leshghian speech of the Caucasus, and the Dravidian tongues of Baluchistan and India.[96] Again, some scholars e, g. Rev.

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[93] H. C. Beck—*Notes on Sundry Asiatic Beads* (IV) P. 176. *Man.* no. 134. October, 1930.

[94] Proceedings of the Section IV, International Congress of Prehistoric and Proto-historic Sciences. Reported in *Man.* Article No. 251. September 1932. It should be noted here that Dr. G. S. Ghurye is of opinion that the Indian dolmens are essentially "different from the Caucasian ones and intimately linked up with the Egyptian funerary mounments" G. S. Ghurye—*Funerary Monuments of India. Man in India.* Vol VI. 1926.

[95] R. Caldwell—*Comparative Grammar of the Dravidian Languages.* London. 1913. P. 77.

[96] H. H. Johnston —*op. cit.*

Frère Evangeliste de Larajasse, draw a genetical relationship between the Somali Language of Africa and the Dravidian language.[97] He says:— "L'langage des peuples Indiens qui parlent le Concanin, ou le Tamil ou Tamul, semble avoir quelque affinité avec la langue Somali. Les moeures des peuples nomads, qui habitent les montagnes du Dekkan, sont les moeurs du peuple Somali; *et la langage Somali a de si grandes affinités avec le Tamil, qu'un Madrassien après quelques semaine est capable de comprendre un Somáli.*"

Conclusion.

The comparison of so many cultural traits in rather disconnected groups cannot at present lead to any final conclusions. It is very difficult to connect the different cultural traits in bundles of culture complex with a view to finding out migrations and contacts. Unless the archaeology of all these areas brings up the chronological setting over the whole region in one order, any conclusion would be merely hypothetical and likely to be reshuffled at any newly discovered data. The chronological possibilities of the culture-contact between India and Africa and the Afrasian zones would be as follows:—

1) Proto-Human times: Whether South Central Asia or Africa is made the cradle land of humanity, there must have been considerable migration of peoples of an identical culture in both the zones. The identity of forms of the earliest

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[97] R. N. Cust—*The Language of Somaliland.* Art X. *Journal of the Royal Asiatic Society.* 1898. PP. 99-100. H. Clarke, in his "*On Prehistoric Culture in India and Africa*", tried to establish a cultural contact between India and Africa from the linguistic standpoint, *vide* Report of the British Association for the Advancement of Science, 1875; referred to in H. C. DasGupta's "*Bibliography of Prehistoric Antiquities*". *Journal and Proceedings of the Asiatic Society of Bengal* Vol xxxvii. 1931. No. I P. 23 (no. 120)

quartzite coup-de-poings from South India and South Africa would lend support to that proposition.

2) Early Indo-Egyptian contact,—possibly since pre-dynastic times—which has led scholars like Perry to visualise the grand sweep of an Indo-Egyptian heliolithic culture-complex all over the world.[98]

3) Indo-Malay,—restricted rather to the southern coastal regions of India and the eastern shores of Africa, comprising rectangular hut, out-rigger-canoe with sail (Stuhlmann) and several cultural traits associated with coconut-palm.

4) Indo-Arabic-Persian cultural drift,—which

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[98] The discovery of portraits (modelled in potteries) at Memphis by Flinders Petrie of an Aryan woman from the Punjab and a seated Hindu figure shows how intimate was the cultural intercourse between India and Egypt. Writes Petrie,—"*These are the first remains of Indians known on the Mediterranean.* Hitherto there have been no material evidences for that connection which is stated to have existed, both by embassies from Egypt and Syria to India, and by the great Buddhist mission sent by Asoka as far west as Greece and Cyrene. We seem now to have touched the Indian Colony in Memphis, and *we may hope for more light on that connection which seems to have been so momentous for western thought.*" These portraits date about 200 B. C.—W. M. Flinders Petrie—*The Peoples of the Persian Empire. Man.* (Article no. 71) 1908.

It should be further noted that the ownership marks on Hyderabad prehistoric pottery found by Mr. Yazdani offer a similarity to those found in the pre-dynastic potteries of Egypt.

according to Hirschberg[99] would include many elements of higher culture appertaining to metal-working in gold and silver, weaving with cotton, craftmanship in wood etc.

5) Indo-Portugese.

In the 16th century, the Portugese, like the Arabs, infiltrated practically every part of the world and was chiefly instrumental in sacttering culture-traits between Africa and Asia or America and South America and *vice-versa.* To this might be ascribed the cross-bow, and a type of fishing-trap common to India, Africa and Brazil. (*)

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[99] W. Hirschberg—Die arabisch-persisch-indische Kultur an der Ostküste Afrikas, ihre Beziehungen nach dem Innern des Kontinents.

Mitteilungen der Anthropologischen Gesellschaft in Wien. LXI Band. V Heft. 1931.

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INDIAN ETHNOLOGY IN CURRENT PERIODICAL LITERATURE.

In the "*Nature*" of December, 10, 1932, Mr. W. C. Osman Hill of the Colombo Medical College, has communicated a brief note about the result of his recent expedition to the land of the Veddhas, a tribe living in the interior of Ceylon.

This tribe has been previously investigated by the Sarasin Brothers, and Prof. C. G. and Brenda Seligman and, it is hoped, when the detailed result of this expedition will be published, as he assures us, in the *Ceylon Journal of Science*, it will bring to light some interesting but hitherto unknown facts concerning the tribe.

The present expedition lasted for an week (from the 18th to the 25th of September 1932) and during his short stay he had been able to visit several Sinhalese villages where the best elements of the Veddhas are found even to-day. Mr. Osman Hill was able to take measurements only of the males and every one of them was photographed.

The materials that have been collected in this expedition are hairs from all parts of the body and three skeletons (2 males and, 1 female). The Skeletons were in good preservation except the female one which is pathological, due perhaps to her suffering from yaws which caused atrophy in the bones of the left upper limb and also spindle-shaped swellings on both tibiæ. The male tibæ are platychnemic and the perforated olecranon fossa in the humerus which was regarded by Sarasin as a characteristic feature of the Veddhas has been identified in one instance only.

The skulls hear uniformity while the skeletons do not. In one male skeleton are found the "non-union of the neural arches in the sacral veretebræ" and, in the female, there is a pronounced "sacralisation of the last lumbar vertebræ, associated with complete absence of the last pair of ribs".

F. Kingdon Ward.—

Explorations on the Burma—Tibet Frontier.

(Geographical Journal. December, 1932).

This paper, which was originally read at a meeting (25th April 1932) of the Royal Geographical Society, gives a succinct account of the explorations by the author in collaboration with Lord Cranbrook, in the Burma-Tibet frontier in 1930. The chief objects of the expedition, in our author's words, were: (i) "to collect specimens of the fauna and flora, and to introduce into Britain new hardy plants from that area; (ii) to cross the pass at the head of the Nam Tamai Valley directly into Tibet, and link up our route, if possible, with that of any other traveller farther north; (iii) to make observations on the glaciers of this region, as to whether they were retreating or advancing, and how far they had formerly extended".

This expedition was preceded by other two, one in 1926, and the other 1928, and the expenses were met with by the Trustees of the Percy Sladen Memorial fund.

It is beyond the scope of this journal to dilate upon the description of their travels, collections of fauna and flora and other matters which are rather of geographical interest, but in it is contained a short description of a very interesting pygmy tribe living in the forest of the upper Irrawady, known as Darus.

They are a very timid people, having no unanimity in their generic name. They are called by the Tibetans as Dalu or Talu while the Shans of Hkamti Long. Khanug. They are said to have been pushed up towards the Irrawady from the north and west by the pressure of both the Tibetans and Chinese and, with Mishmi, probably sprung up from a Common source.

Their stature hardly exceeds 5 ft, though women are generally shorter than men.

Tattooing is practised by the girls and no value other than ornamental are generally attached to it. But its different patterns found scattered in many places points out the presence of clan system among them.

They are still in a very primitive condition, as is evidenced from their material culture which has not evolved beyond the "neck tie" hœ, harpoon, and thorn-lined traps for fishing.

Though the general method of the disposal of the dead is cremation, the important ceremony which they prize most is the burial of the ashes which, during the lying-in-state period is kept in the coffin which is sometimes carved with a face.

At that time, the coffin is placed on the bamb platform which is decorated with *takin* and oth *horns* and other belongings of the depart man. Inspite of their close contact with t Tibetans, they have still retained their faith animism; Buddhism has failed to infiltrate amo them.

This article has been enriched by several e cellent photographs, of which three describe t Darus, and, for other illustrations concerning th tribe, the attention of our readers are being draw to "*Lhe Illustrated London News*". May, 7. 193 (PP. 749-751).

J. K. G.

In *Man* for January 1933, Mr. R. U. Sayc gives an account of *An Indian Fire-walkin* *ceremony in Natal.* He witnessed the ceremo in 1926 at Pietermaritzburg near the Mariam (*Mariamma* the South Indian equivalent of t north-Indian Kāti) temple in the Indian quart of the town. He supplements his first-hand obs vation of the ceremony by information gather during a subsequent visit to Pietermaritzburg 1929. The celebrations continue for ten days gether and are concluded by fire-walking. T participants who were probably all of South Ind origin and acted, in fulfilment of a vow duri some sickness or misfortune to walk through t pit containing hot ashes. By its side are t smaller pits, one filled with turmeric water clean and purify the feet of the fire-walkers fore they step into the hot ashes; another filled with cow's milk supplied by childless wom or by peoyle who have been sick and have vowed the milk. After a goat is sacrificed to the goddess, the devotees walk first throgh the turmeric water, then through the ashes, and finally through the milk bath. Finally the milk from the pit is thrown on to the ashes; some people gather the holy ashes from the pit either to be placed on the forehead at prayer time or (perhaps as it was customary at one time) mixed with water and drunk to cure disease.

In the *Journal of the Anthropological Institute* for July to December, 1932, Mr. A. Davies gives the results of his *Re-survey of the Morphology of the Nose in relation to Climate.* His survey generally confirms the conclusions of the previous workers (Thomas and Buxton) as to the close connection between nasal index (measured on the living) and climate. The result for India, as obtained by Mr. Davies, is quite the reverse of that found by Thomas and Buxton. Thomas and Buxton found World Correlation (146 series) was $+0{\cdot}7238 \pm 0{\cdot}0258$ of these (146), 61 were from India and a higher correlation seemed to be indicated for these than for the world as a whole. But Mr. Davies' results show—

World Correction (590 series) $+0{\cdot}601 \pm 0{\cdot}0178$

World excluding India (442 series)$+0{\cdot}714 \pm 0{\cdot}0149$.

Mr. Davies finds the correlation grading in the following order :—Africa, Europe, World excluding India, North and South America, India. He points out that the results of Thomson and Buxton appear to be weakened by the fact that they took average annual temperature and average annual relative humidity instead of mean monthl temperature and relative humidity for a typic summer month as used by himself.

The low correlation in India is thus accounte for by Mr. Davies. "If the correlation betwee nasal index and climate is loud in any region i must be due to one of two causes:—(1) that t N. I. has become very specialized and will n longer adapt to climate; (2) relative recency (migration. Throughout India and America th N. I. far from being specialized is of definitel mesorrhine or medium type. It appears tha migration factors are chiefly responsible for th differences in degree of corelation between th continents. Thus one may suggest that the population has been most stable and has suffered least from major race movements in Africa and Europe, and least stable in America and India. Thi is in accordance with the facts of racial history Large numbers among the populations of bot India and Pre-Columbian America are the result of immigration that is likely to date, in th former case at least, from not before the 2n millenium B. C."

In the *Quarterly Journal of the Mythic Socie* for January, 1903, Mr. S. C. Mitra continues h *Studies in Bird-Myths* and in *Plant-Myths.*

In the *Journal of the Andhra Historic Society* for January, 1933, Dr. C. Narayan R continues his *Study of Telugu Roots.*

In the January and February numbers (193 of *Tirumalai Sri Venkatesvara*, Mr. A. Padmanabh continues his account of *Early Dravidian Race*

NOTICES OF BOOKS.

Caste and Race in India.—*By G. S. Ghurye (Kegan Paul 1933). Pp VII+209. Price 10s. 6d. net.*

Ethnologists will accord a hearty welcome to this study of the institution of the Caste-system and its relations to race, by an accomplished Indian sociologist. The book is divided into nine chapters. In the first chapter Dr. Ghurye describes the outstanding features of the Caste-system which he takes to be six in number, namely,—(1) segmental division of society; (2) social hierarchy with definite scheme of social precedence; (3) restrictions on feeding and social intercourse; (4) civil and religious disabilities and privileges of the different sections; (5) lack of choice of occupation; (6) restrictions on marriage. In the second chapter, headed "Nature of Caste-groups," the author attempts to show by a reference mostly to the nomenclature of various castes in the Central Provinces and the Bombay Presidency that it is these caste-names that generally serve to furnish a clue to the process by which distinction between groups came to be formulated. The names point either to an occupational origin or an ethnic or tribal origin or a religious origin, or an adventitious origin and application of some nickname (emphasizing some striking cultural peculiarity of the group). The names of the so-called sub-castes, again point either to a (1) territorial origin, or to an (2) ethnic or mixed ethnic origin, or to an (3) occupational origin, or to a (4) sectarian origin, or to an (5) adventitious origin suggesting some nickname. So far the author brings forward no new materials or theories. In chapters III and IV, the author traces the history of Caste through the ages—from the earliest known times down to the present—and lays under contribution various data supplied by ancient Sanskrit literature. In chapter V, headed "Caste and Race" our author discusses and criticises the correctness of previous classifications of the ethnic elements in India by Risley and Ruggeri, and proposes a revised classification which, according to him, is suggested by "the ascertained facts of Indian anthropometry". He would distinguish the following six main physical types among "the Hindu population of India", viz—(1) the Indo-Aryan; (2) pre-Dravidian; (3) the Dravida; (4) the Western; (5) the Munda; and (6) the Mongoloid. The author writes, "The Munda type centres round Chota Nagpur. The jungle-folks of South India generally represent the pre-Dravidian type". It may be observed that some, if not most, of the jungle-folks of South India and the Munda tribes of Chota Nagpur could hardly and included among the 'Hindu population' proper; and the older term 'pre-Dravidian' is now generally regarded as a little too indefinite and the term 'Proto-Australoid' appears to be now in greater favour. And a 'proto-Negroid' blend is discernible not only among some jungle tribes of the South, but also among some forest tribes of Central India. In chapter VI, headed "Elements of Caste outside India", our author passes under review class-distinctions observed in various countries and communities, ancient and modern, and shows that "distinction by birth has been usually recognized by many primitive peoples and almost all the major civilizations of ancient times, and that so far as other civilized countries are concerned, in each case it was the special conditions making for political unity and commercial aggrandisement, that slowly killed the ideas of status by birth and removed the unfreedom of occupation". In chapter VII, headed "Origins of Caste", Dr. Ghurye opines that some of the important aspects of the Hindu Caste System originated in the Gangetic plains; "Caste in India", according to our author "must be regarded as a Bramhanic child of the Indo-Aryan culture, cradled in the lap of the Ganges and thence transferred to other parts of India by the Brahmin prospectors." "The Vedic opposition between the Āryā and Dāsa is replaced by the Brāhmaṇic classification of the 'dwi-jāti' and 'Eka-jāti' (the Sūdra), suggesting the transmutation of the Dāsa into Sūdra in the minds of the writers of the Brāmhaṇic and later writers. As an important constituent of the Brāmhaṇic culture in connection with the sacrificial ritual there arose very exaggerated notions of ceremonial purity. "The restrictions on intermarriage and on food were thus in their origin the outcome of the desire of the Brāhmins to keep themselves pure." "The Southern peoples before their contact with the Indo-Aryan culture most probably had beliefs about the sanctity and power of food to transmit certain qualities very much like those of primitive peoples."

"With functional differentiation in society there came into being separate occupational groups with more or less distinct interests. There is also (*sic.*, in addition to the tendency of the occupation of each group to be hereditary) a natural inclination for each occupational group to be habitually endogamous. Both these tendencies became rules. Occupations thus became endogamous groups." "The lack of rigid unitary control of the State, the unwillingness of the rules to enforce a uniform standard of law and custom, their readiness to recognize the varying customs of different groups as valid, and their usual practice of allowing things somehow to adjust themselves helped the fissiparous tendency of groups and fostered the spirit of solidarity and community feeling in every group." Special rights for the higher groups and disabilities on the lower ones was almost a universal feature of class-society; and Brahmanic theory of four castes with their rights and disabilities does not call for any special qualification. Only the practice of untouchability is peculiar to the Hindu system. "The ideas of untouchability and unapproachability arose out of the ideas of ceremonial purity, first applied to the aboriginal Sūdras in connection with the sacrificial ritual and expanded and extended to other groups because of the theoretical impurity of certain occupations. Multiplicity of the groups and the thoroughness of the whole system are due to the habit of the Hindu mind to create categories and to carry things to their logical end." The unqualified equation of the ancient "Dāsa" with the later "S'udra" may be open to criticism.

In addition to these natural and historic factors that contributed to the evolution of Caste in India, the learned auther might perhaps have referred also to an element of design (suited to the needs, beliefs and usage of the time) on the part of the great ancient Aryan architects of the Hindu social fabric who aimed at absorbing the aboriginal inhabitants in the Hindu fold and civilizing them by assigning to them a place, albeit the lowest, in the graduated social scheme with perhaps opportunities in those olden days for rising to the higher stages according as they proved fit. The last two chapters of the book, headed respectively, *Caste, Recent and Contemporary* and *Conclusion* deal with somewhat controversial questions of the present and the future of Caste in India, and need not be dwelt upon in this review,

On the whole, Dr. Ghurey has made a valuable contribution to the literature on the Hindu Caste System which will be read with interest and profit by the student, the administrator, and the general reader.

Indian Caste Customs.—*By L. S. O'Malley, C. I. E., I. C. S. (Cambridge University Press 1932) Pp. IX+190. Price 6 S. net.*

The author of this interesting little volume is one of the very limited number of Indian Civil Service men who have made a special study of Indian caste customs. As a District officer, compiler of a few volumes of District Gazetteers and also as a Provincial Superintendent of Census operations in Bengal, Bihar and Orissa, Mr. O'Malley had special opportunities of studying caste customs and the working of the caste system—its actual merits and defects. References in the pages of this informative volume shows that besides his own personal investigations in Bengal, Bihar and Orissa, he has studied published works and reports on Caste customs in other parts of India, and utilised the result of his studies in writing the present popular and illuminating book.

The book is divided into seven chapters, headed respectively, I. The Caste system; II. Caste Government; III. External Control; IV. Penalties; V Marriages and Morals; VI. Food and Drink, VII Occupations; VIII. The Untouchables; IX. Modern Tendencies.

The author has presented the facts withou prejudice or bias, and his inferences and conclusions appear, on the whole, to be sound. A regards the merits and demerits of the caste system, the following extract from the author concluding chapter will, it is expected, receive th assent of most impartial observers:—

> "Caste is hide-bound and fettered by inhibitions which m have been reasonable in inception but have become unreas able. It sets up artificial standards of value and it is hos to reform. It circumscribes the sphere both of sympathy of co-operation. It limits individual initiative and it is an obst to national unity and progress. A Hindu is primarily a mem

of a caste and not of a nation; his loyalty is to a group and not to the general community. There can be no united national life so long as society is split up into thousands of separate sections, each guided by its own canons of conduct and not by a common public opinion. There can be little social progress so long as men of low caste, however educated they may be, whatever position they may have attained in Government service, in commerce, or in the professions, are condemned by the stigma of birth to lifelong social inferiority or even degradation.

On the other hand, caste, like other human institutions, has its good points, which ought to be recognized. It forms a bond of social and religious union among its members and stimulates a corporate spirit which would otherwise often be lacking. It acts in a certain degree as a charitable institution, and, where there is a common occupation, it has some of the characteristics of a trade union. But it does its best work as a guardian of morality. It is caste which habituates Hindus to that respect for authority and exercise of self-restraint which form the basis of social order. In the past it has helped to save Hindu society from disintegration and Hindu culture from destruction. Through successive conquests and revolutions it has been a stable force, and its stabilizing influence is not without political importance at the present time, when the communist movement is said to be a menace to India. [1] A system which is permeated by religion is utterly opposed to the Bolshevist doctrine of a war upon religion. The idea of a class war is alien to a people which believes that the social hierarchy is divinely ordained and that equality is not only contrary to experience but is impossible because each man's state of life is predetermined by his actions in past lives".

The book deserves the careful attention not only of the student of sociology, but also of administrators and others who have to deal with the Indian people.

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[1] *India in 1929-30* (Calcutta, 1931), p. 10.

Indian Caste System: A Study.—*By C. Hayavadana Rao, (Bagalore Press. 1931). Pp. VII+ 77+ VII.*

This little book on Caste System is a reprint of a series of articles by the author that appeared in the *Mysore Economic Journal.* They are, as Prof. Wadia says in the Foreward, a lucid summary of the theories developed by different scholars. A special feature of the booklet is the reference in chapter VI to the Indian theory of caste as set forth in the oft-quoted tenth Maṇḍala of the Rigveda, in the Brāmhanas, the Upanishads, and in some other ancient Sanskrit works. The author thus summarises his conclusions—

that caste is not unknown out of India; that caste in India was not, as has been said, the "invention" of the Brahman, but the result of contact between Aryan and non-Aryan races, the latter contributing as much towards its formation as the former; that marked physical differences between the races in India no less than the peculiar social tendencies they exhibited contributed thus in developing the idea of caste; that in the beginning it was probably purely functional in character; that in later times as the area of contact grew, the growth of national, tribal, degraded and mixed castes went on practically unchecked; that possibly during this period the functional basis changed into a hereditary one, owing as much to the influence of systematizing legists as to the influence of the religious doctrine of Karma; that the development of caste in India has been both gradual and unaffected by foreign influences; that from the beginning there have been protests against its tendency to fission and debasement of human character; that the tendency of the teachings of the Upanishads and the *Bhagavad Gita* was to place caste on a less untenable basis; that the Jain, Buddhist, Saiva and Vedanta schools of thought altogether ignore caste; that Manu's theory should only be treated assuming the conditions of his time; that in so far as Manu follows the older writers in dividing castes into Brahman, Kshatriya, Vaisya and Sudra he is oniy following the usual formula enunciated by them and trying to adjust the conditions of his own time with the formula as enunciated by them; that formula having been evolved when function probably formed the basis of caste,--should not be construed literally and that regarded from any point of view the division itself is not borrowed but indigenous".

The author concludes with a reference to the interesting but anomalous division of certain castes into the Right-hand and Left-hand divisions which, Sir Edward Gait suggested, might be a survival of a dual exogamous grouping which existed before the development of the caste system.

An Indian Monk. His Life and Adventures.— *By Shri Purohit Swami.— With Introduction by W. B. Yeats. (Macmillan, 1932). Pp. XXVI+205. Price 7 S. 6 d. net.*

This fascinating antobiography of an Indian monk (Sādhu) presents to the Western world an illuminating interpretation of the religious life and thought of India, uot by expounding its abstract philosophy but by faithfully delineating a real concrete life. The distinguished Irish poet W. B. Yeats in his Introduction to the volume says, "It seems to me something I have waited for since I was seventeen years of age......When Shri Purohit Swami described his journey up those seven thousand steps at Mount Girnār, that creaking bed, that sound of pattens in the little half-forgotten temple, and fitted everything into an ancient discipline, a philosophy that satisfied the intellect, I found all I wanted".

The straight-forward story of the saintly author's life from his childhood up to his visit to Europe in the beginning of his 49th year, is as edifying as Banyan's *Pilgrim's Progress* or Thomas Ā Kempis' " *Imitations of Christ*", and as fascinating as a book of romance. The story of the author's life shows how "the devout Hindu is always seeking divine at-one-ness in all the various aspects of life, which is the outward manifestation of the holy spirit, or else its travesty and disguise". It is not only of the ideals and aspirations, the spiritual temptations, struggles and attainments of an Indian religious man that the book gives us a concrete individual illustration; but it further serves to give the reader a clear insight into the social and spiritual life of India at its best. But there is imperfection in everything human; and the traces of magical ideas and extremism in ascetic practices of which we get glimpses in this book may be regarded by some as instances of such imperfection.

Views and Reviews. First and Second Series. A Selection of uncollected Articles (1884-1932).— *By Havelock Ellis. (Desmond Harmsworth). Pp. VIII+322, & VI+230. Price 10S. 6d. net.*

The first volume contains thirty-two and the second volume twenty-seven, unpublished writings of the distinguished author, now for the first time collected and arranged in chronological order. Dr. Ellis is one of the foremost living thinkers; and the essays, reviews and articles contained in these two volumes containing the views and reflections of a great Englishman are of considerable interest either in relation to the time of their first publication or in relation to to-day. Some of the articles, such as those on 'The Ancestry of Genius', 'The Human Geography of Western Europe', 'Religion and sex', 'The World's Racial Problem' 'The Future of Religion', will particularly interest the anthropologist and sociologist.

Mysore Gazetteer, volumes I. - V.— *Revised and Edited by C. Hayavadana Rao. (Government Press, Bangalore).*

Mr. Hayavadana Rao undertook a very important and onerous task when he agreed to edit these volumes, and he has indeed very ably discharged the task not only with great credit to himself but also to the great benefit of the State that employed him as also to the reading public. Highly interesting as all the five volumes (and eight parts) are, the ethnologist will feel most interested in the first volume in which the learned author who has made a long and assiduous study of the subject has given an account of the ethnology of the State, its tribes and castes, marriage-customs, languages and religions. The second volume (Part I) which deals ably with the Pre-history and Proto-history, Archæology and Numismatics, Sculpture and Painting, Architecture and other Fine Arts of the State will also be of as great interest to the anthropologist and sociologist as to the historian. The remainning volumes too have besides their special interest to the student of Mysore history, economics and administration, their great interest to every student of the history and economics of India in general. We heartily congratulate the gifted editor of these volumes and the enlightened administration of Mysore on this most valuable edition of the Gazetteer of the State.

Cambridge History of India. Vol. VI., The Indian Empire, 1858-1918— *Edited by H. H. Dodwell. (University Press, Cambridge, 1932). Pp. XXIV+660. Price 30 S. net.*

In the present volume, Prof. Dodwell brings the history of the expansion of British India from the year 1818, to which the previous volume hnd caried it, down to the outbreak of the Sepoy Mutinny in 1857-8, and the administrative history of British India down to the year 1918. Like previous volumes of the Cambridge History, the present volume is an authoritative and up-to-date account of the administrative history of the period it covers. Although every student may not agree on all points with the distinguished writers of different chapters as to the causes of certain events and manifestations and the effects of certain measures, all will agree in the high value of the volume as an exhaustive and well-documented administrative history of British India.

Methods of Social Study.—*By Sidney and Beatrice Webb. (Longmans, Green & Co., London.* 1931*)* Pages V-261, *Price 8s. 6d. Net.*

Sidney and Beatrice Webb are familiar names to students of Sociology and Economics of modern times. As a man belonging to the group which originally started the Fabian society, as a Professor of the London School of Economics, as a member of Mr. Macdonald's cabinet when he sat in the House of Lords as Lord Passfield, and as a social thinker, Mr. Sidney Webb is well-known. Closely associated with his name is that of Beatrice Webb, his wife, joint author with her husband of many books. The present work bears the unmistakable stamp of the Webbs—the "Webb Speciality." They have spent 45 years in studying social institutions and thus have acquired remarkable experience as social investigators. In the present treatise they have recorded for the guidance of young students their own experiences, — concrete instances gained from first-hand knowledge. The first chapter, "Province of Sociology determined" is illuminating though succintly written. Various methods which the authors found profitable during the course of their investigations are discussed in subsequent Chapters;

and one specially good chapter is on the "A of Note-taking"—a chapter which will pro very useful to the research scholar preparing thesis for his Doctorate. The layman who dabb in sociology and the earnest sociologist will f this book equally profitable. It should prove useful handbook to every young social investigat Mr. and Mrs Webb have laid all social investigato under their debt by publishing this book. T get-up of the book is excellent.

The Coming and Evolution of Life.—*B Prof. H. E. Crampton, Ph. D., Sc. D. (Pp.IV+10*

The Coming of Man.—*By George Grant Ma Curdy, Ph. D. (Pp. VI+157)*

The Races of Man.—*By Prof. Robert Benn Bean, M. D. (Pp.IV+134)*

Fossils.—*By Prof. Richard Swann Lull, Ph. Sc. D. (Pp. VI+114)*

Heredity and Variation.—*By L. C. Dun D. Sc. (Pp.IV+120)*

The Plant World.—*By C. S. Gager, Ph. Sc. D., Pd. D. (Pp. VII+136)*

The Earth.—*By C.A. Reeds, Ph. D. (Pp.IV+1*

The Animal World.—*By Prof. J. G. Needha Ph. D., Litt. D. (Pp. IV+116)*

Space, Time and Relativity.—*By H. Hor Sheldon, Ph. D., (Pp. 104)*

Energy and Matter.—*By C. B. Bazzoni, Ph. D., (Pp. VIII+133)*

Stars and Planets.—*By Donald H. Menzel, Ph. D., (Pp. IV+121) (The University Society, New York 1931-32.)*

These books of the "University Series", otherwise very appropriately called the "Highlands of Modern Knowledge," though short in compass, are packed with all essential and up-to-date facts in their respective subjects. Written by a specialist in a simple and perspicuous style and in a popular though masterly way, each of these volumes compresses in a little over one hundred pages a comprehensive and easily assimilable survey of the subject it deals with. The whole series should prove a treasure-house of first-hand kowledge of inestimable value to that large section of the educated public who are thirsting for knowledge but are unable to afford the time or the money required for the purshase and study of bulky sceintific treatises. Each book in the series is provided with a Glossary of technical terms, and suggestions for further reading, and an Index, besides copious, well-executed and suitable illustrations. This highly attractive series will perform a real social service.

In the Coming and Evolution of Life, Dr. Crampton in a vivid and masterly way tells the fascinating story of the processes by which living things have come to be as they are. In eight illuminating chapters, Professor Crampton lucidly explains 'The Nature of Life and Living things,' 'The Origin of Living Matter,' 'The Meaning of

Evolution,' 'The History and Concepts of Evolution,' 'The Interpretation of Animal Structure,' 'Development and Evolution,' 'The History of Fossil Animals,' and 'The Natural Processes of Evolution.' The author explains how all the discoveries up to the present time have corroborated the essential tenets of Darwin's formula of the dynamics of evolution, viz., the natural selection of congenital characteristics. "The entire body of evidence of whatever service overwhelmingly proves the superior value of the innate factors of organic qualities, and it allows to the environment the power to induce somatic changes to a limited extent, if at all. Even if acquired modifications do arise, and even if they are induced generation after generation, there is no proof whatsoever that they can enter into the heritage of the kind,"

In *The Coming of Man*, Dr. G. G. MacCurdy, gives an illuminating account of the fascinating story of Pre-Man and Prehistoric Man. Within the small limits of the present series, he has with consummate skill covered practically the whole of the ground traversed in his two-volume work on *Human Origins* which exceeds a thousand pages. Commencing with an account of the beginning of life on earth. the author gives a clear, though brief, view of man's ascent from his nearest of kin, and the physical types of the earlier human races as evidenced by skeletal remains of 'Fossil Man.' He next passes in review the slow growth of human culture from Eolithic, through Palaeolithic, Mesolithic and

Neolithic periods down to successive Metal Ages, and includes in his account all the more important culture elements, viz., Food; Shelter; Clothing; Ornament and Toilet; taming of fire; art and religion; language; music and writing; labour and industry; domestication of animals and plants; transportation; commerce; the healing art; textiles and pottery; and metallurgy.

In the *Races of Man*, Dr. R. B. Bean tells the story of the differentiation and dispersal of man. After briefly tracing some of the steps in man's ascent, the author describes some of the methods of differentiation of man in the formation of races, points out the main routes of race dispersal, and gives a brief though lucid account of the characteristics of the cheif races and their subdivisions and indicates their present location. Some physical features of man would, however, appear to have received more than their proportionate share of space whereas some important topics have been rather summarily treated.

In his volume entitled, *Fossils: What they tell us of Animals and Plants*, Dr. R. S. Lull briefly describes the fascinating revelations of fossil evidence concerning plants and animals and men in the millions of years of geologic time. As even a brief description of the evolution of the entire animal kingdom as set forth in the fossil records would fill volumes, the author has wisely chosen to begin with a general summary and then turn to certain groups in which the fossil series is remarkably complete, referring the reader to more extended works for further instances and greater detail.

In his volume on *Heredity and Variation*, Dr. L. C. Dunn, gives an easy and popular but very illuminating and up-to-date exposition of the most important science of *Genetics* or the laws of heredity and variation,—continuity and change in the living world,—an understanding of which is fundamental to any philosophy of life. The author gives the reader a clear exposition of the present authoritative view that new variations arise by internal rearrangement in the hereditary materials, and that those may be affected by certain influences from the external world. What we actually inherit from our parents are "two minute single cells containing an assortment of molecules of living substance—gens," some of which specify the kinds of reaction which shall take place between our bodies and minds and our surroundings, the end result of our development depending on both factors.

In his volume on *The Plant World*, Dr. C. S. Gager gives us a most interesting and popular account of plant life on our earth. The origin and classification of plants; their ways of reproduction, feeding, drinking, respiration and other self-maintaining or 'selfish activities,' their growth in 'Plant Societies' or groups; the colour, pollination and odour of flowers; other characteristics and activities of flowers, fruits and seeds; the cycle of life in the plant world; the continous evolution of new plant forms and the gradual extinction of old forms, and the hybridization of plants,—are told by Prof.

Gager in nineteen short but lucid chapters packed with information.

In his volume on *The Earth*, Dr. C. A. Reeds, begins with a historical *resumé* of geological thought from the beginnings of geological observations of the early Greeks down to latest times. An anthropologist should have liked to see some of the earlier beliefs, superstitions and speculations collected, and set forth. But obviously the limits of the present series would preclude them. In successive chapters Dr. Reeds gives a concise but clear account of the theories regarding the origin of the Earth; the outstanding features of the Atmosphere, the Hydrosphere, the Lithosphere, the Centrosphere, Volcanoes, Earthquakes, and the Geologic Record. A radio-active chart of geologic time based upon 1930 determinations is also given.

In his volume on *The Animal World*, Dr. G. J. Needham, gives us a very entertaining and instructive popular account of Animal Life on Earth in thirteen well-written chapters headed successively as follows:—The Appeal of the Animal World; Primitive Man among the Animals; Hunting and Husbandry; Useful Animals; Plants and Animals, The form of Animals; How Animals grow up; How Animals get about; How Animals defend themselves; Food and Shelter and Shifts for a living; The Ways of Animals; and Our changed relations to Wild Life.

In his volume on *Energy and Matter*, Dr. C. B. Bazzoni has presented, in a popular form, the most reçent views on the nature of Energy and

Matter, and has attempted to show the true bases of our knowledge in the fields of physical investigation and to emphasize the changing state of our opinions as experimental work is pushed forward. A sketch of the course of progress of science beginning from the age of Alchemy down to the present era is given. The various theories regarding the structure of atoms and the interconversion of matter and energy, are clearly set forth. The happy anology of the description of Matter and Energy as the 'Building Blocks of the Universe' (*vide* Title-page of the book) is kept up by appropriately characterizing protons and electrons as the two types of building bricks of the Universe, and the radiation energy as mortar. The author's account of the experiments of Millikan in support of the theory of the building up of the universe as opposed to Jeans' theory of the dying universe gives us hope that our universe, though doomed to ultimate extinction, will survive to a good old age.

In his volume on *Stars and Planets*, Dr. Donald H. Menzel tells us the fascinating story of the Star-world. Chapters 1 to IV contain a historical sketch of the progress of Astronomy through the ages beginning from the Ancients and ending with the astronomers of the present age, laying special stress upon the works of Aristotle, Ptolemy, Kepler and the classical works of the two Herschels. Chapter III describes the Astronomer's Tools; Chapter IV gives an account of the Moon, her phases, topography, craters, and motions; chapters

V to VIII deal with the Solar System, Comets; Meteors and Meteorites, Eclipses, Occullations and Transits; Chapter IX records and discusses the Nebular, Planetesimal and Zidal theories of the origin of the Solar System; Chapter X deals with Stars and Constellations, and Chapter XI with Stars, Nebulae, and Stellar Systems. In a short compass we have here an excellent introduction to Astronomicals cience.

In his admirably little volume on *Space, Time, and Relativity*, Dr. H. H. Sheldon furnishes that layman with a lucid exposition of the epoch-making Theory of Relativity. The historical background for Einstein's Theory forms a very interesting chapter of the book in which the author has conclusively proved that the works of 19th century physicists like Michelson, Lorentz, Kaufmann laid the foundation for the epoch-making theory by Einstein. The diagrams and illustrations of this book give the layman a clear conception about the relativity of Time, Space and Motion. The presentation of such a difficult theory in such an easily understandable manner without practically any reference to mathematical technicalities is an achivement worthy of the highest praise. We know of no better little book giving a popular and assimilable exposition of the theory of relativity.

Indian Civilization and its Antiquity.—*By B. Mukerji, M. A, Rasacharya. (Nababibhakar Press, Calcutta, 1932.) Pp XII+122. Price Rs. 2,* This book is divided into four chapters, head respectively, I Phallicism and the spread of Indi Culture, II The Gipsies and the Spread of Indi Culture, III Indian Chemistry and its Antiquit and IV [English] Words borrowed from Sanskr In chapter I, the author attempts to prove th phallicism originated in India, and thence spre in later ages all over the world, and that t island of Crete was colonised by Indians w used to visit Europe in pre-historic (?) times commercial and cultural expeditions. In chapt II, the author attempts to show from etymologic evidence that the Gipsies (who, the author suggest are of the same origin as the Egyptians) migrate from India before the formation of the Prakrit i. e. before 1,000 B. C. As might be expected o the author who is the President of the Institut of Hindu Chemistry and the author of t volumes in Sanskrit (with English translatio on Indian Chemistry and Alchemy. the stronge Chapter of the book is Chapter III, head "Indian Chemistry and its Antiquity" which gi a succint account of ancient Indian chemists a their achievements. In Chapter IV, a list Sanskrit words used in certain European a Asiatic countries is given to show that Indi used to travel all over the ancient world.

The Secret Lore of India and the One P fect Life for All.—*By W. M. Teape. (Heff Cambridge, 1932.) Pp XVII+345. Price 12s. 6d.*

In this book, which is said to be "the first-fruits of a life-long study of the Foundations of Eastern and Western Religious Thought," the author gives translations in English verse of a few main passages from the *Upanishads*, with an 'Introduction' and a 'Conclusion.' The passages are judiciously selected as representative of the philosophical conceptions of the *Upanishads*, particularly the mystery of the *Ātman*. The first two Selections are considerably expanded in the translation, and a literary prose translation is also given in Appendices I and II. The Introduction attempts to trace the sacred tradition of the Aryans "from its roots in the Eurasian plain to its flower in the Secret Lore." The 'Conclusion' institutes a comparison between the teachings of the *Upanishads* and those of Christianity. This comparison cannot unfortunately be said to be unbiassed. What may be called the missionary spirit of the author appears to have prevented a proper evaluation of the doctrines of the *Upanishads*.

Our author writes, "For our men of the Forest the old gods had gone. Personality and Spirit had taken their place. The great World-Person that had moved so mightily in the world for them as enchanters, had become One, and that One simply Self, simply Spirit". But, says he, "Greater things" are told in the Christian Scripture which enable us "to catch sight of deeper levels",—"individuality in universality" and the "Perfection that knows no Sin"—"the Perfect Self, the Self with its self-containedness, universality, mutuality and other virtues in perfection" as revealed in "the Perfection"—Jesus Christ. The author has not done justice to the "Forest fathers" in supposing that the ideas of individuality and mutuality of self and its sinlessness are not clearly conceived by them, though the idea of universality of self is admitted to have been reached. As a matter of fact, individuality, mutuality and universality are all recognized by the *Upanishads* as being present in the life of spiritual immanence. But it is different in the life of spititual transcendence where the spirit transcends all thought and all understanding. This idea of spiritual transcendence is an unique and invaluable contribution of the ancient Indian Forest fathers to the world. And in place of one Son, the *Upanishads* recognise the possibility of every individual self or soul attaining perfect knowledge and sinlessless and identity with the One.

1. ORAON RELIGION AND CUSTOMS.

By RAI BAHADUR SARAT CHANDRA ROY, M. A., B. L., M. L. C.

Price.—*Twelve Rupees.*

SOME OPINIONS ON THE BOOK.

Col. T. C. Hodson, M. A., *Reader in Ethnology in the University of Cambridge* :— "A book like this—sane, clear, scientific, sympathetic, comprehensive—is of prime importance to the student of Anthropology, to the student of Religion and to the Administrator who seeks or should seek to understand the forces which govern human activities, and it is full of charm and interest for the general reader who desires to know something at once accurate and inteligible of the Peoples of India".

Dr. R. R. Marett, M. A., D. Sc., *Rector of Exeter College Oxford* :—"In my opinion the latest work of Rai Bahadur Sarat Chandra Roy, namely, *Oraon Religion and Customs* (Ranchi, 1928), fully maintains the high standard of accurate observation and critical interpretation already reached by him in his well-known researches for which European scholars are exceedingly grateful ; for it is obvious that, so long as he accepts the same canons of inductive enquiry, the Indian investigator has a better chance of probing and penetrating to the truth in regard to all things Indian and especially in regard to the psychological facts."

Sir Arthur Keith, M. A., M. D., L. L. D., F. R. C. S., F. R. S., :— "I am very conscious of the great work you have done and are doing. There is no school or college of Anthropology but will make a special place for this your latest work both on its library shelves and in its heart. I doubt if any one has ever done so much for the Anthropology of a people as you have done for the Oraon. I endorse all my friend Col. Hodson has written in his preface and in particular would I underline your disinterested and persistent labour for the advance of Science".

Dr. Roland B. Dixon, A. M., Ph. D., *Professor of Anthropology in the Harvard University, Cambridge, Mass.*, :—

I was delighted to get your recent book on *Oraon Religion* and have reviewed it for the American Anthropologist. The

book carries on the high standard which you have set in your previous works, and presents the material in a very effective from. I congratulate you on it most cordially.

The Times (London, February 28, 1929):— A very detailed account of the religion and magic of the Oraons of Chota-Nagpur, a people of Dravidian speech. It is based on twelve years' investigation by a highly competent ethnologist, who has already published a work on this people. It can be seen what a rich field there is in India among the more primitive peoples, which, indeed, can best be tilled by trained Indian ethnologists. There is a long chapter also on movements during the last hundred years and more among the Oraons towards a higher, simpler religion, which will interest students of religious psychology.

The Nature (London, March 9, 1929):— Ethnologists are indebted to Sarat Chandra Roy for his valuable book "*The Oraons of Chota-Nagpur*" (1915), and now he has provided a study of *Oraon Religion and Customs* which should be read by all those who are interested in primitive religions. The especial value of this book is not merely in the detailed accounts of socio-religious and religious rites and ceremonies and magical practices, but in the very suggestive religious transformations that have occurred since the Oraons arrived, and the process is still continuing.

The Discovery. (London, February 1929):— When the history of ethnological study in India comes to be written, the name of the author of this work is least likely to be overlooked. By his own work and by his encouragement of others as editor of the periodical *Man in India*, he has deserved well of his colleagues in anthropology. Sarat Chandra Roy has published here the promised continuation of his studies of the *Oraon* of which the first instalment appeared as long ago as 1915. The author is here concerned only with their religious and magical beliefs, both directly in themselves and in their relation to the Oraon social institutions, such as are involved in birth, marriage and death. Of particular interest to students of folklore and primitive religion are the sections dealing with agricultural ceremonies and the belief in witchcraft which afford much useful material for both comparison and contrast with European folklore.

A final chapter deals with revival movements and modern tendencies in Oraon religion which is highly suggestive and deserves the careful attention of all who are in any way interested in or connected with the problems of administration among peoples of non-European culture.

The Statesman (Calcutta, March 17, 1929):— The Rai Bahadur is wellknown for his excellent monographs on the *Mundas* and the *Oraons*, and is everywhere recognized as an anthropologist of rare insight. India, with its great variety of races, nationalities, creeds, customs, and cultures affords an excellent field for the anthropologist and sociologist. This new book will be studied with delight by scientists in many countries. The author has made a capital use of his opportunities of studying the several tribes of aborigines in Chota-Nagpur and Central India.

The Forward (Calcutta, February 19, 1929) :— The learned author is a pioneer in the field of anthropology and needs no introduction. His previous works—' *The Birhors*, *The Mundas* and *The Uraons* are classics and had already established a world-wide reputation for him. The present volume is a befitting successor to his previous works. It is the outcome of the author s deep and laborious investigations into the religion and customs of the *Oraons*, a much-neglected tribe of Chota-Nagpur, carried on for a long period of about twelve years and as such an invaluable treasure to students of anthropology and students of religion.

The get-up of the book is excellent. In short, the book leaves nothing to be desired.

The Servant of India (Poona, May 30, 1929):— The book is worthy of the author, Rai Bahadur S. C. Roy of Ranchi, who is a well-known student of anthropology relating to the aboriginal tribes of Chota-Nagpur and the Central Indian Plateau

The chapter on socio-religious rites and ceremonies is very interesting and demands careful study. The last chapter on the *Oraon Religion* with its revival movements is exceedingly instructive.

We strongly recommend the book to students of anthropology as well as to the general reader.

The Modern Review (Calcutta, January, 1929)·— Rai Bahadur Sarat Chandra Roy is one of the few Indians who has shown a keen interest in the study of the primitive folks of this country. In fact, the works that he has already published have earned for him the reputation of being our foremost authority on the aborigines of Chota-Nagpur. The present volume on *Oraon Religion and Customs* is the sequel to his earlier work on *The Oraons of Chota-Nagpur* (1915). In it the Rai Bahadur has given an exhaustive account of the religions and social institutions of this interesting tribe, the result of close personal observation and intimate acquaintance spreading over a period of twenty years. He has analysed the Oraon beliefs into their purely religious and magical sides and has described the customs and rites associated with the chief crises of life. As an authoritative treatment therefore of Oraon life in all its phases, including some of the modern tendencies, his account could hardly be improved.

The book is well-printed and illustrated and the price is moderate for a work of this kind. For students of Anthropology in the Post-Graduate classes of our Universities it should form a very handy and reliable text-book for some of their courses.

The Quarterly Journal of the Mythic Society (Bangalore, July, 1929) :— Rai Bahadur Sarat Chandra Roy is too well known in the anthropological world to need any introduction. The publication of a volume on *Oraon Religion and Customs* was foreshadowed in 1915, when his *Oraons of Chota-Nagpur* first appeared. He has since been engaged in the investigation of their religion and customs for well-nigh twelve years, and the results are embodied in the present richly illustrated volume.

The work is full of charm and interest to the general reader who desires to know something of the religion and customs of this interesting people. We have great pleasure in commending this volume to all students of anthropology.

BOOKS FOR SALE.

at the "MAN IN INDIA" office,

Church Road, Ranchi.

1. **THE BIRHORS** : *a Little-known Jungle Tribe of Chota-Nagpur.*—By Rai Bahadur Sarat Chandra Roy, M. A., B. L., M. L. C. Pp. viii+608, 36 plates. (Ranchi : "*MAN IN INDIA*" Office, 1925). Price Rs. 10-; or 15 s.

SOME OPINIONS.

SIR JAMES G. FRAZER, D. C. L., L. L. D., Litt. D., F. B. A., F. R. S., O. M., Professor of Anthropology in the Trinity College, Cambridge writes :—

.........I find it characterised by the same high qualities a mark your former monographs on the **Mundas** and **Oraons.** You have rendered a valuable service to anthropology by placing on record the customs and beliefs of a very primitive tribe about which very little was known before and which, but for your careful and prolonged observations, might have passed away practically unknown. As in your former volumes I admire the diligence with which you have collected a large body of interesting facts and the perfect lucidity with which you have set them forth. The book is a fine specimen of a monograph on an Indian tribe and must always remain the standard authority on the subject. I congratulate you heartily on your achievement, and earnestly trust that you will continue your valuable investigation and give us other similar accounts of other primitive and little known Indian tribes.

SIR ARTHUR KEITH, M. D., F. R. C. S., L. L. D., F. R. S., Conservator of the Museum and Hunterian Professor, Royal College of Surgeons of England, writes :—

.........You have done a splendid piece of work—one which will make Europe indebted to you.........

DR. A. C. HADDON, M. A., Sc. D., F. R. S., Reader in Ethnology, of Cambridge, writes :—

.........Your accustomed excellent work. It is a most useful contribution to Indin Ethnology.........

Dr. ROLAND B. DIXON, A. M., Ph. D., Professor of Anthropology in the Harvard University writes :—

.........You are certainly doing work to be proud of in th studies you have published of the Chota-Nagpur tribes, and al anthropologists are in your debt. If only we could have similar studies of all the wilder peoples of India, how fine i would be !..........

THE NATURE, (London : September 19, 1925):—

.........Students of Indian anthropology are deeply indebted t Mr. Roy for the light he has thrown on the past and presen culture of the Chota-Nagpur plateau. In the *Bihar and Oris Research Society's Journal* he has opened up new ground in th archaeology of his area. His monographs on the *Mundas* and *Oraons* are classics. "The Birhors" is yet another first-rate study, a study not merely of an obscure tribe but also of the workings of that mysterious complex of thought and feeling which go to make up human culture.................. Mr. Roy is never a theoriser or a partisan ; his diction is simple and precise, hi inspiration comes straight from the hearts of the humble fol he has made his friends.

2. A MUNDARI-ENGLISH DICTIONARY......B

Manindra Bhusan Bhaduri, B. L., Khunti (Ranchi

A vocabulary of Mundari words and their meanings, with phonetic and etymological notes. A excellent hand-book for those who wish to lea the language, as well as for a scientific study of t same.

With an Introduction by the Editor of th Journal.

MAN IN INDIA.

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I. THE VĀRENDRA BRĀHMANAS OF BENGAL.

(An anthropological study—based on physical measurements).

By

TARAK CHANDRA RAY CHAUDHURI, M. A., B. L., P. R. S.
Lecturer, Calcutta University.

Introduction.

The Brāhmaṇas of Bengal fall in one or other of the five classes of Brāhmaṇas such as the Sârasvatas, Kānyakubjas, the Gauḍas, the Utkalas and the Maithilas. They are subdivided into five endogamous subcastes—the Rāḍhiya, the Vārendra the Vaidika, the Saptas′atī and the Madhyas′reṇi.

The Vārendra Brāhmaṇas take thier name from the country known as Varendra lying to the north of the Padmā between the Karatoyā and the Mahānandā rivers. It corresponds roughly to the districts of Pabna, Rajshahi, Dinajpur and Bogra.

In this paper an attempt has been made to study their physical features from anthropometric measurements taken on 179 male Vārendra Brāhmaṇas.

The measurements were taken according to th methods laid down in *Lehrbuch der Anthropolog* by Martin. Besides these, observations of the sk and eye colour, character of hair, the shape the nasal bridge and the peculiarity of the upp eyelid were made.

Specification of the Vārendra Brāhmaṇas.

The Vārendra Brāhmaṇas (Table I.) are a mediu headed people with oval face and straight leptorrhin nose. The stature varies from short to tall. Th hair is wavy and the complexion light brown.

Table I.

Specification of the Vārendra Brāhmaṇas.

			No.	p. c.
Stature.	Pygmy	× —1299	0	0
	Very short	1300—1499	0	0
	Short	1500—1599	37	20·7
	Below medium	1600—1639	32	17·8
	Medium	1640—1969	31	17·3
	Above medium	1670—1699	35	19·5
	Tall	1700—1799	43	24·0
	Very tall	1800—1999	1	·6
	Giant	2000— ×	0	0
Cephalic Index.	Dolichocephalic	× —75·9	33	18·4
	Mesocephalic	76·0—80·9	69	38·5
	Brachycephalic	81·0—85·4	60	33·5
	Hyperbrachycephalic	85·5— ×	17	9·5
Facial Index.	Hyper eury prosopic	× —78·9	14	7·8
	Eury prosopic	79·0—83·9	30	16·7
	Mesoprosopic	84·0—87·9	35	19·5
	Leptoprosopic	88 0—92·9	66	36·8
	Hyperleptoprosopic	93·0— ×	34	18·9
Nasal Index.	Hyperleptorrhine	× —54·9	6	3·4
	Leptorrhine	55·0—69·2	129	72·1
	Mesorrhine	70·0—84·9	44	24·7
	Chamærrhine	85·0—99·9	0	0
	Hyperchamærrhine	100·0— ×	0	0
Orbito-nasal Index.	Platyopic	× —109·9	9	5·0
	Mesopic	110·0—112·9	16	8·9
	Proopic	113·0— ×	154	86·0

The statistical study of the data at my disposal gives the following results :—

Table II.

179 Vārendra Brāhmaṇas.

	Mean.	Standard Deviation.	Coefficient of variation.
Stature	1658·8 ± 3·21	62·87 ± 2·23	3·79
Head Length	184· 5 ,, ·34	6·63 ,, ·23	3·57
Head Breadth	147· 8 ,, ·27	5·29 ,, ·19	3·58
Cephalic Index	80·11 ,, ·21	4·15 ,, ·15	5·18
Face Length	117· 0 ,, ·35	6·92 ,, ·24	5·94
Face Breadth	132· 8 ,, ·29	5·72 ,, ·20	4·29
Facial Index	88·10 ,, ·29	5·72 ,, ·20	6·49
Nose Length	55· 3 ,, ·18	3·51 ,, ·12	6·36
Nose Breadth	36· 1 ,, ·12	2·53 ,, ·09	6·94
Nasal Index	65·28 ,, ·30	5·88 ,, ·21	8·97
Orbito-nasal Arc	122· 1 ,, ·33	6·61 ,, ·23	5·42
Orbito-nasal Diameter	102· 4 ,, ·34	5·19 ,, ·18	5·09
Orbito-nasal Index	119·61 ,, ·29	5·79 ,, ·20	4·49

Before trying to deduce any conclusions from the measurements, let me see how far they form a normal series. For this purpose the means, standard deviations and the coefficient of correlations of the entire series and a smaller one consisting of 78 subjects taken at random from it have been worked out. The results of this calculation are set forth in the following tables.

Table III.

179 Vārendra Brāhmaṇas.

	Mean.	Standard Deviation.
Stature	1658·8 ± 3·21	62·87 ± 2·23
Head Length	184·5 ,, ·34	6·63 ,, ·23
Head Breadth	147·8 ,, ·27	5·29 ,, ·19

Table IV.

78 Vārendra Brāhmaṇas.

	Mean.	Standard Deviatio
Stature	1661·3 ± 5·07	61·1 ± 3·27
Head Length	184·8 „ ·52	6·31 „ ·34
Head Breadth	148·3 „ ·44	5·36 „ ·29

Table V.

179 Vārendra Brāhmaṇas.

	Coefficient of Correlations.
Stature and Head Length	·21 ± ·49
Stature and Head Breadth	·23 „ ·47

Table VI.

78 Vārendra Brāhmaṇas.

	Coefficient of Correlation.
Stature and Head Length	·56 ± ·83
Stature and Head Breadth	·36 „ ·72

To compare the results thus obtained from the two series of 179 and 78, I shall compare the absolute difference of their standard deviations, means and coefficient of correlation with the square root of the sums of the squares of the probable error. Let me call the difference D, the square root in question S, the coefficient of correlation r, and to show the form of calculation, * I shall

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* *Biometrika*, Vol. I, p. 177

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Edited by

RAI BAHADUR **SARAT CHANDRA ROY**, M. A., B. L., M. L. C.

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——:o:⊙:o:——

take the standard deviation of the head breadth as an example. Then—

St. Dev. of 78 Vārendra Brāhmaṇas is 5·36 ± ·287
St. Dev. of 179 Vārendra Brāhmaṇas is 5·29 ± ·187
D = ·07

$$S = \left(\cdot187^2 + \cdot287^2 \right)^{\frac{1}{2}} = \left(\cdot034969 + \cdot082369 \right)^{\frac{1}{2}}$$
$$= \cdot342$$

Thus it appears that D is less than one-half S.

Collecting all the results together, I have the following tables—

Table VII.

78 and 179 Vārendra Brāhmaṇas.

	Standard Deviations.		Mean.	
	D.	S.	D.	S.
Stature	1·8	3·9	2·5	6·2
Head Length	·33	·41	2·9	·69
Head Breadth	·07	·34	·07	·46

Table VIII.

78 and 179 Vārendra Brāhmaṇas

	Coefficient of Correlation.	
	D.	S.
Stature and Head Length	·35	·95
Stature and Head Breadth	1·26	·86

From these figures it is clear that there is no sensible difference between the two series: D is not in any case, even in the means, twice to thrice S. I may, therefore, treat the present series as normal for all practical purposes. Further evidence of homogeneity will be shown by frequency tables. Now, let me study the measurements and see what results they reveal.

Stature.

The mean stature is 1658·8 ± 3·21 mm., the minimum being 1511 mm. and the maximum 1850 mm. and the range of variation 339 mm. A reference to the accompanying table will show that the frequency distribution of the stature begins at 1515 mm. (mid. value of the class interval) and the frequency rises at its maximum at 1635 mm. and then gradually falls to 1815. From Table I, it is seen that 20·7 *per cent* of them are short, 17·8 *per cent* below medium, 19·5 *per cent* above medium, 24·0 *per cent* tall and ·6 *per cent* very tall. If I take the 'below-mediums', and 'above-mediums' into one class as medium, then I get 20·7 *per cent* short, 54·6 *per cent* medium, 24·0 *per cent* tall and ·6 *per cent* very tall.

Table IX.

Frequency distribution of Stature of the 179 Vārendra Brāhmaṇas.

Stature (mm)	no.	p. c.	Stature (mm)	no.	p. c.
1495—	1	·6	1675—	29	16·2
1525—	12	6·7	1705—	20	11·2
1555—	11	6·1	1735—	13	7·2
1585—	17	9·5	1765—	7	3·9
1615—	32	17·9	1795—	0	0
1645—	36	20·1	1825—	1	·6

Cephalic Index.

The mean cephalic index is 80·11 ± ·21. It varies from 66·5 to 89·5. From Table X, it will be seen that it begins at 67·5 (mid. value of the class interval) and goes on rising until the maximum frequency is reached at 77·5 and then it suffers a slight fall, again it rises at 83·5 and then again it gradually falls. From Table I, it is seen that the head form of the Vārendra Brāhmaṇas is very variable. All types of heads, from dolichocephalic to hyper-brachycephalic ones are met with. This may be due to a mixture between a long headed and broad headed people and the result of inbreeding for a long time.

Table X.

Frequency distribution of the Cephalic Index of the 179 Vārendra Brāhmaṇas.

Cephalic Index.	no.	p. c.	Cephalic Index.	no.	p. c.
67—	2	1·1	79—	25	13·9
69—	0	0	81—	29	16·2
71—	3	1·7	83—	30	16·7
73—	9	5·0	85—	11	6·1
75—	26	14·5	87—	10	5·6
77—	31	17·3	89—	3	1·7

Facial Index.

The mean facial index is 88·10±·29. It varies from 75·0 to 101·5, the maximum frequency being at 91·5. From Table I, it is seen that like the shape of the head, that of the face too is variable. All forms are met with, although leptoprosopic ones are more frequent (36·8 *per cent*). This also lends support to the hypothesis warranted by the cephalic index.

Table XI.

Frequency distribution of the Facial Index of th
179 Vārendra Brāhmaṇas.

Facial Index.	no.	p. c.	Facial Index.	no.	p. c.
75—	5	2·8	89—	23	12·8
77—	4	2·3	91—	27	15·1
79—	10	5·6	93—	24	13·4
81—	9	5 0	95—	8	4·5
83—	18	10·0	97—	8	4·5
85—	15	8·3	99—	5	2·8
87—	22	12·3	101—	1	·6

Nasal Index.

The mean nasal index is 65·28±·30, the minimum 53·2 and maximum 81·9. The table of frequency distribution (Table XII) shows the maximum frequency at 66 (mid. value of class interval). From Table I, it is seen that the nose varies from hyper-leptorrhine to mesorrhine with a maximum frequency (72·1 *per cent*) of leptorrhine noses. There are no chamærrhine noses.

Table XII.

Frequency distribution of the Nasal Index of the
179 Vārendra Brāhmaṇas.

Nasal Index.	no.	p. c.	Nasal Index.	no.	p. c.
52—	3	1·7	68—	14	7·8
54—	5	2·8	70—	12	6·7
56—	4	2·3	72—	14	7·8
58—	21	11·7	74—	11	6·1
60—	20	11·2	76—	3	1·7
62—	20	11·2	78—	3	1·7
64—	23	12·8	80—	1	·6
66—	25	13·9			

Orbito-nasal Index.

The mean orbito-nasal index is 119·61±·29, the minimum 104·1 and maximum 135·0 From Table XIII, it will be seen that the distribution traces a regular curve with the mode at 118·5 (mid. value of the class interval). From Table I, it will be apparent that the root of the nose is sufficiently high from the level of the orbit, giving a maximum (86·0 *per cent*) of pro-opic indices, thus differing from the Mongoloids.

Table XIII.

Frequency distribution of Orbito-nasal Index of the 179 Vārendra Brāhmaṇas.

Orbito-nasal Index.	no.	p. c.	Orbito-nasal Index.	no.	p. c.
104—	1	·6	120—	24	13·4
106—	1	·6	122—	20	11·2
108—	4	2·3	124—	19	10·6
110—	13	7·2	126—	11	6·1
112—	12	6·7	128—	7	3·9
114—	16	8·9	130—	4	2·3
116—	18	10·0	132—	2	1·1
118—	26	14·5	134—	1	·6

So long I confined myself to the consideration of the individual characters separately. But in order to have a comprehensive idea of what the people is like, we must combine the characters.

On combining stature, cephalic index and nasal index, I have the following table.

Table XIV.

	St.	—1599			1600—1699			1700-	
N. I.	C. I,	—75·9	76.0-80·9	81·0 +	—75·9	76·0-80·9	81·0 +	-75·9	76·0 80·9
—69·9	No.	7	6	11	14	29	30	6	13
	p. c.	3·9	3·4	6·1	7·8	16·2	16·7	3·4	7·2
70·0-84·9	No.	×	9	3	4	10	12	1	2
	p. c,	×	5·0	1·7	2·3	5·6	6·7	·6	1·1
85·0+	No.	×	×	×	×	×	×	×	×
	p. c.	×	×	×	×	×	×	×	×

From this table it is seen—

(1) medium stature, brachycephalic, leptorrhine
= 30 (i. e. 16·7 p.

(2) medium stature, mesocephalic, leptorrhine
= 29 (i. e. 16·2 p.

(3) tall stature, brachycephalic, leptorrhine
= 19 (i. e. 10·6 p.

(4) medium stature, dolichocephalic, leptorrhine
= 14 (i. e. 7·8 p.

(5) tall stature, mesocephalic, leptorrhine
= 13 (i. e. 7·2 p.

(6) medium stature, brachycephalic, mesorrhine
= 12 (i. e. 6·7 p.

(7) short stature, brachycephalic, leptorrhine
= 11 (i. c. 6·1 p.

(8) medium stature, mesocephalic, mesorrhine
= 10 (i. e. 5·6 p.

(9) short stature, mesocephalic, mesorrhine
= 9 (i. e. 5·0 p.

(10) short stature, dolichocephalic, leptorrhine =7 (i. e. 3·9 p. c.)

(11) short stature, mesocephalic, leptorrhine =6 (i. e. 3·4 p. c.)

(12) tall stature, dolichocephalic, leptorrhine =6 (i. e. 3·4p. c)

(13) medium stature, dolichocephalic, mesorrhine =4 (i. e. 1·3 p. c.)

(14) short stature, brachycephalic, mesorrhine =3 (i. e. 1·7 p. c,)

(15) tall stature, brachycephalic, mesorrhine =3 (i. e. 1·7 p. c.)

(16) tall stature, mesocephalic, mesorrhine =2 (i. e. 1·1 p. c,)

(17) tall stature, dolichocephalic, mesorrhine =1 (i. e. ·6 p. c.)

Now, Haddon * would call the first and third group Pamirian, the fourth Mediterranean, the fifth Nordic and the thirteenth Dravidian. The second group which includes 29 individuals (16·2 p.c.) might be the result of a mixture between these groups. Thus it is seen that the Pamirian element (27·3 p. c.) play an important part in the Vārendra Brāhmaṇas.

DESCRIPTIVE CHARACTERS.

A few words might be added regarding descriptive characters. It is needless to say that they are less satisfactory than measurements. They depend too much on the eye of the observer and on the subject previously observed.

SKIN-COLOUR.

It has been mainly subdivided into very dark brown, dark brown, brown, light brown, very light brown and yellowish.

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* A. C. Haddon— *The Races of Man*, 1924, pp. 27, 24, 26, and 21.

	V. D. B.	D. B.	B.	L. B.	V. L. B.	Yellowi
No		29	92	53	4	1
p. c.		16·2	51·4	29·6	2·3	·6

It is seen that the prevailing colour is brow

EYE-COLOUR.

The colour of the iris has been noted. It ha been subdivided into brown, light brown and hazel.

	Brown.	Light Brown.	Hazel.	
No	148	29	2	
p. c.	82·7	16·2	1·1	

Thus the eye colour is generally brown.

CHARACTER OF HAIR.

It is generally classified into straight, woolly curly and wavy. As it was not possible t collect specimens of hair in order to examin them under the microscope, some hairs whic could not properly be classed with straight hair neither with wavy nor woolly, were classed a stiff—slightly or strongly.

	Curly.	Wavy.	Sl. stiff.	Stiff.	
No.	5	147	19	8	
p. c.	2·8	82·1	10·6	4·4	

Besides these, the shape of the nasal bridge the presence of mongolian fold were noted. Thirteen cases of hooked noses were observed but I did not come across any mongolian fold.

II. TRACES OF TOTEMISM IN SOME TRIBES AND CASTES OF NORTH-EASTERN INDIA.

By Bhupendranath Datta, M. A., Ph. D.

It is supposed that the records of the Aryan races do not show any trace of totemism, and that totemism is to be found amongst the non-Aryan primitive races. But the ethnologists opine that totemism is a particular phase of social integration based on belief in a close relation between a bloodrelated group on the one side, and natural or artificial object on the other side. Generally this object is an animal (species) or a plant (species) and seldom a lifeless object. The social importance of totemism that is spread over a vast area of earth's surface, consists in the fact that the members of a totem community i. e. all those having a common totem, believe themselves to be the descendants of their totems and call themselves after the names of the same.

The institution named "totemism" was first discovered by the Scottish savant McLennan in 1869. The word "totem" is derived from the language of the Ojibway tribe of North America. Since then, this socio-religious phenomenon has become the object of study of the ethnologists and sociologists. But the scientists engaged in the research either studied the natural peoples or the half-civilised non-Aryan speaking peoples only. As Prof. Max Schmidt[1] says "Ethnology is the study of natural expansion of life of mankind outside the asiatic-european culture circle". This is tantamount to saying that the subjects of ethnological researches are to be confined to non-historical peoples only, who naturally lie in the very low steps of civilisation.

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[1] Max Schmidt—"*Voelker Kunde*" p-43.

But this view seems to be illogical. Because whether we accept the theory that the phases of civilisation are more or less common amongst different races of mankind, and that ethnologic institutions grow similarly amongst different people under the stress of a similar economic and social *milieu*, or the theory of migration holds good, or the theory of "culture circles" which from time to time give rise to "ethnologic parallels" is accepted, or the theory of the phenomenon of convergence is credited, the fact remains that the conditions of life of the ancestors of the historic races in dim ages of the past must be read in the light of comparative ethnological study. One may call these as "pre-history" and "archaeology"; but it cannot be asserted that the life-conditions of the primitive ancestors of the present-day historic races, worked in a peculiar or particular process of development from that of the present day races living outside the pale of civilisation. Hence if totemism and taboo are to be found amongst the present-day races living outside the circle of asiatic-european historic races, it is not improbable that such institutions also have been present in the society of the primitive ancestors of these races.* On this account in cannot be said that the Aryan-speaking peoples were immune from the appearance of the phenomenon known as "totem" and "taboo". For this reason, Freud says, "many traces and survivals otherwise hard to interpret lead to the conclusion that totemism once existed amongst the aboriginal Aryan and Semitic races of Europe, so that many investigators are inclined to recognise in totemism a necessary phase of human development through which every race has passed".[2] Regarding this matter it can be said here that a comparative study of the ethnological conditions of the pre-historic period of the aryan-speaking races in the light of modern ethnological researches have not yet been fully made. Hence as Freud suggests we are at dark regarding the significance and explanations of many socio-religious phenomena that are to be found in the literature or traditions that are left as the scanty debris of the pre-historic institutions of the Indo-European races.

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* Traces of what look like totemism in Vedic literature has been noted by Pof. MacDonell in his *Vedic Mythology* p. 153. Ed.

As the subject matter of this paper deals with the traces of totemism amongst some tribes and castes of north-eastern India, we need not dwell any further on the above mentioned topic ; yet we cannot avoid of talking something about enquiring any trace of totemism amongst the pre-historic and ancient races of India known as the Mohenjo-daro peoples and the Vedic Aryans when we are investigating about totemism amongst some of the present-day peoples of India.

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[2] S. Freud—"*Totem and Taboo*" p. 5.

Here again, it must be said that the life-conditions of the Vedic Aryans have been studied by the philologists only; and the remains of the Indus civilisation are the subject-matter of study of the archaeologists, hence we are at dark regarding other aspects of the lives of these peoples. It is true that no archaeologic remains of the Vedic Aryans have been found out, yet as some ethnologic research is possible in pre-history, the data left in the ancient literature may give us some clue to make ethnological studies. An enquiry in this domain is a necessity because if totemism existed amongst the Vedic peoples and as well as amongst the non-Aryan peoples of India, a reaction and assimilation might have taken place. At least such a conjecture is not impossible.

The Indologists in general do not talk of any trace of totemism in the Vedas, yet some suspicion has been aroused in the minds of some like Hopkin, Oldenburg and Macdonell. The former says "Even totemism as a survival may be suspected in the 'fish' and 'dog' peoples of the Rig Veda, as has recently been suggested by Oldenburg".[3] He also says that the later Hindus like the Iroquois believe that the earth rests on the back of a turtle or tortoise. And Brinton[4] says that the totem form of the tortoise is well known in America. Further Hopkin says "In our opinion the Avatar-theory is often only an assimilation of outlying totem gods to the Brahman's god, or as in the case of the flood-story the necessary belief that the "fish" must have been the god of the race.[5] Again, he says "The famous (totemistic) tortoise legend was originally Brahman's.[6] Again, Macdonell and Keith say "Sigru is the name of the tribe occurring in the passage of the Rig Veda. If Sigru is connected with the latter Sigru (horse-radish) which is quite probable, it is possible that the tribe was totemistic and non-Aryan, but this is a mere matter of conjecture. The Matsas (fishes) were probably Aryan"[7] Further Macdonell says, "Plants (in the Vedas) are frequently invoked as divinities, chiefly in enumerations along with waters, rivers, mountains, heaven and earth. One entire hymn (Rig Veda 97) is however devoted to the praise of plants (Oshadhi) alone, mainly in regard to their healing powers. Later vedic texts mention offerings made to plants and the adoration paid to large trees passed in marriage procession."[8] In connection with the veneration of the plants one should not forget the honour given to King Soma and the deification of the Soma plant. One may suspect a trace of totemism in this deification, as Freud along with the ethnologists defines a 'totem' as made not only out of an animal but also plant or forces of nature, viz. rain and water as well.[9] Of course one may opine that no clear trace of totemism to be found in the Vedas as other characterist of totemism are not present there. But o should not forget that the Vedas speak of people who were comparatively in advanced sta of social organization, the traces of whose prima val institutions are recorded in the literatu either as survivals of the old or as advance new forms. But an enquiry in this line of stud is worth the trouble.

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[3] E. W. Hopkin—"*The Religions of India*" 1896, p. 537.

[4] Brinton—"*Myths of the New World*" p. 85.

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[5] E. W. Hopkin—op. cit. p. 430.

[6] Ibid— p. 464.

[7] Macdonell and Keith—"*Vedic Index*" Vol. I. p—378.

[8] A. A. Macdonell—"*A History Sanskrit Literature*" p—111.

[9] S. Freud—"*Totem and Taboo*" p—3-4.

Again, in reading the results of the archae logical studies of the remains of Mohen-jo-Da and Harappa one may suspect the traces totemism amongst that people as well. In t report on the "Mohenjo-Daro and the Indi Civilization" edited by Sir John Marshall w read, "Thus we have at both Mohenjo-Daro an Harappa two forms of tree worship represented.... The evidence at Mohenjo-Daro for zoolatry... far more abundant than for that of tree worship. what these therianthropic creatures do signify that some animals like some trees, are alread conceived of as personal deities and endowed, li human beings with distinctive attributes a functions; that is to say, that they are n merely reverenced in the sense that animals whi are sacred or taboo are reverenced...Side by si with these.. however, there are other animals, whi are not found on the seals...these animals such a dog, pig, hare, squirrel etc. may or may not have be objects of worship on that point we cannot be sure but we may safely infer that, if they were not wo shipped, they were regarded as sacred or tab possessed of magical powers of one kind or another, and for that reason were used as amulets."[10]

In this research on the remains of the Indus civilisation the investigators find the trace of tree and animal worship, and suspect a certain form of animal taboo to have been prevalent there. Of course no clear trace of totemism has been found in these remains. But if at the back of totemism lie tree and animal worship we may say that totemism develops out of the aforesaid cults. As Max Schmidt says, "Connected with ancestor worship (manism) is the so-called animal worship (animalism). The latter develops into the worship of some special animals as protecting deities and ancestral animals (totemism).[11] We have already seen that totemism includes the worship of animals, tree and occasionally inanimate objects; and the objects of worship become tabaoos, thus from taboo we trace the totem. And if the animals described by the investigator of Mohenjo-Daro remains suspect some animals as taboos, is it not impossible that these taboos had connections with totemism as well Any way, we may or may not make out a clear case of totem from the remains of such hoary antiquity as that of Mohenjo-Daro. But the suspicion remains just the same that as the anthropologists find similar racial elements in the Mohenjo-Daro peoples as in the modern peoples of India,[12] and even the elements of some of the modern Indi religions such as, phallic worship and the cult the Jogis and the Mother-cult, are traced bac from the Mohenjo-Daro peoples, it is not im probable that the zoolatry of the Indus peopl have come down in some form to the moder peoples of India as well. But we will still wai to hear further from the archaeologists on thes subjects. It will suffice for us to know tha the traces of totemism and its concomitant tabo are suspected amongst the pre-historic peoples India.

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[10] Sir John Marshall—"*Mohenjo-Daro and the Indus Civilisation*" p—65-74.

[11] Max Schmidt—"*Voelker Kunde*" p—241.

[12] Sir John Marshall—op cit.

Again, we hear of totemism amongst th modern non-Aryan peoples of India. And on does not know how much assimilation has take place between the totemistic systems of all thes races. Here again, Hopkin says, "some of th animals of the gods of the Hindu sects of to-day appear to be totems of the wild tribes". * Thu if the above conjectures of Hopkin hold good then it can be said that a cultural assimilatio in the matter of totems has taken place in th institutions of present day Hindus. Now w come to the subject matter of our enquiry The objects of my enquiry are confined in th provinces of Bengal and Assam. In the cours of my anthropological investigations amongst som of the tribes and castes of North-eastern Indi viz. the Santals, the Bauris, the Koras, th Kherias of Bengal and the Cacharis of Assam, I found that these peoples venerate some animals and trees while they abstain from eating the flesh of the animals they venerate. This led

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* Hopkin—"*The Religious of India*" P. 445.

me to the enquiry whether these practices have something to do with the institution of "totem and taboo" as is extant amongst the undeveloped races of the world. The result of my study is put in this paper as follows—

The Santals :— The Santals examined in this paper hail from the district of Bankura of West Bengal. They do not intermarry with the Santals of Santal Parganas. They keep strictly to themselves and never mix with their Hindu neighbours. Race-pride is strong among them, and they never call themselves as Hindus. Yet now-a-days they are imitating their Bengalee-Hindu neighbours in many things. The 'gotras' of these Santals are Pankal and Sol fishes and Betelnuts. Those who have these 'gotras' i. e. those who claim their descent from these things, abstain from eating them.[13]

The *Bauris*—The Bauris are a so-called depressed caste of the district of Bankura. They are outside the pale of Hindu society, though they call themselves as Hindus. Their features and status betray them to be Hinduised aboriginals.

The Bauris are divided into four divisions ; Malla-bauris, Dhala-bauris, Sekhoria-bauris and Mana-bauris. This means, they are divided into four phratries. And these are named after the divisions of the country in which they live. Thus, the Bauris of Mallbhumi are called Mallabauris those of Dhalbhumi are ,the Dhalabauris; those Sekharbhumi are known as Sekhoriabauris; an those of Manbhum as Manabauris. By living in thes lands they have divided themselves into mutuall exclusive societies. Each of these phratries is a endogamous group. The Bauris worship the Dharma Thakur. The religious ceremony is performe by their priest called Paramanik who is one the elders of their castes, and is appointed b their local Raja or landlord.

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[13] Risley gives a list of the totems of the Santals he investigated as, Nilgai, wild goose, hawks, Marinda (a kind of grass), conch shell, betel palm etc.— "*The Tribes and Castes of Bengal*" Vol. I p—XLIII.

One of the 'Gotras' of the Bauris is Kashy Bog (striped heron). Dog is held in very muc respect by the Bauris; and one gets heav punishment from the social leaders in the way penance etc. if he strikes the same animal. Th striped heron and dog both are taboo to them and they abstain from eating the flesh of thes animals. They eat chickens, and in many cases they eat the beef of dead cows. But they wil never hurt the above-mentioned two animals.[14]

The *Kherias*—The Kherias live on the hill of the old land of Baraha-bhumi now a par (present Rani-bandh police station) of the distric of Bankura. It is said that these Kherias ea raw flesh. Malodour coming out of their bodie is terrible. They formerly used to live naked

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[14] Regarding the Bauris, Risley says "Traces of totemism howev still survive in their reverence for the red-backed heron and th dog, and perhaps in their strong objection to touching hors dung. The heron is looked upon as the emblem of the tribe a may not be killed or molested on pain of expulsion from th caste"—"*The Tribes and Castes of Bengal*" p—79.

They live on the roots and potatoes dug out from the jungles. Their 'gotra' is *lamb.* They carry conveyance on their shoulders known as Palanquin, but they won't carry it if any piece of lamb's wool remains in it. They don't eat mutton. They have their own language which is different from Santali or Bengali language. The philologists class it as belonging to the Kolarian group. These people are outside the pale of Hindu society.[15]

The *Koras*—The Koras are also a depressed class. They say they came originally from Chota-Nagpur. They also call themselves "Mudi". The word 'Mudi' in Bengalee signifies a grocer. But there is no Hindu caste of the same name. A Hindu who is a grocer by profession falls within the category of Vaishya (merchant) Caste. But these peoples are manual labourers by profession.

The Koras are decidedly an aboriginal caste, as their customs and status show. Probably they are cognate with the Mundas of Chota Nagpur, and living among the Hindus of West Bengal, they are trying to give a hinduised form of their name. Probably the name originally was 'Munda,' and it was subsquently changed to 'Mundi' and finally bengalised to 'Mudi.'

The Vaishnab Babajis act as the 'gurus' (spiritual preceptors) of the Koras. Their Majis (caste elders) officiate as priests during marriages. The tortoise, duck, Sol fish, egg etc. are the objects of their veneration ; and they obstain from using these things as articles of food. These things are their taboos ; and as they venera these things, it seems that these are their totems.[16]

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[15] Regarding the Kherias, Risley says "The septs all are totemistic. A Sept of wild Kherias whom Mr. Ball observed on the Dalma range in Manbhum had the sheep for their totem and were not allowed to eat mutton or even to use woolen rug" loc. cit. p-466.

The *Cacharis*—The Cacharis are dwellers the hills of Cachar. The subjects that I hav met belong to the Colony that has settled on th plains of Assam. They have a language of thei own and they do not call themselves as Hindu although they claim descent from the Hindu her Bhima of Mahabharata. They have an animisti sort religion, and they worship Mansha tree · which they call Shaja tree in thei language. They do not get Brahmins for thei priests. They eat anything except beef (perhap that is due to their constant contact with th Hindus). I think Shaja tree is their totem.[17]

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[16] Regarding the Koras, Risley says "That Kora, Kaora, Khoin Kharia to be the same. He calls them as a Dravidian cas of earth-workers and cultivators in Chota Nagpur, West a Central Bengal, probably an offshoot from the Munda trib The Koras or Kherias of Manbhum and Bankura have we marked totemistic sections of the same type as the Mundas, an the latter admit that some sort of affinity may at one time hav been recognised". But my Kora subjects claim themselves to b Bengalee "Mudis" and would be scandalised in hearing a Mun affinity.

[17] Regarding the Cacharis Rev. Sidney Endle, says "About 17 A. D. the Raja of that period Krishnachandra and his broth Govinda Chandra having made a public profession of Brahm nism, were declared by the Brahmins to be Hindus of th Khatriya caste, Bhima of Mahabharata fame being assigned t them as a mythological ancestor". Further Endle says, "Trib organization of the Cachari race rested in early days very larg at least on a totemistic basis, although it is only here and the that any real regard for the totems can still be said to surviv Amongst septs or subtribes totem names are : heaven, eart tiger, jungle, grass, sesamum, leech, jute, rivers, bamboo, wat vessels, arecca nut, fern, squirrel, Fadam tree." The Mosa roi or Bagh-l-a' roi (tiger folk) claim kndred with the tig As regards their religion, Bathob the house-hold god is repr sented through his divine symbol the Siji (hiju) tree (Euphorb splendens)"—Sidney Endle—"*The Cacharis*"—pp—6-35.

Thus so far about the little investigation that I have made. It is difficult to get things clearly out of them. As they are living in the midst of the Hindus and are in the process of becoming Hinduised, they are fast forgetting their own traditions and customs. Even the Santāls are not immune from this attack. They are wearing the outward signs of Vaishnavism,—the tuft of hair on the middle of the occiput and *Kanṭhi* (sacred bead necklace) around the neck. A Santāl from the village of Mannagar in the district of Mānbhum (now in Bihār) informed me that a Brāhmāṇ officiated as a priest in the time of S′rādh ceremony of his father, and he also brought *Sāligrām Silā* (symbol of god Vishnu) with him during the occasion. Many of the castes such as Bhumij, Bhūiyās, Lohārs etc., cognates in origin with these peoples of Bankura and also untouchables, have become more Hinduised and are adopting Hindu Brāhmaṇical *gotras.* The more they become Hinduised the more they imitate the customs and traditions of the upper class Hindus, and they get the services of the Vaishnab Bābajis and even the Brāhmaṇs. For this reason the remembrance of the role of the totems is forgotten but the taboo remains.

While interrogating these people it is hard to get any clear idea. One has to get at the 'taboo' first and then to the idea of the totem. With some, the idea of an animal or a plant as their ancestors remains very dimly in their traditions, while with others it is an object of worship, and any injury to it is an act of sacrilege, i. e.

breaking of the taboo is forbidden and one g penalty for it. For example, the Bāuris rememb dimly that the striped heron has got somethi to do with their ancestry, and to injure it or eat the flesh of this bird is a sacrilege wi them which will make them pay penalty to t local zeminder or the social leaders. But in t case of the dog they do not connect it wi their ancestry. Perhaps it is due to the influen of surrounding high class Hindus to whom a d is an abomination, and this is being imitated b the Bāuris who will never injure it, and th penalty follows in the case of violation of th social law. Thus the original role of the stripe heron as a totem may be traced, but the ro of the dog as a totem seems to have been forgotten for the above-mentioned reason. But th taboo connected with the dog yet functions, an this may give us some clue to the original ro of the dog as a totem. With the Kheṛiās wh seem to have migrated from outside Bengal, th tradition of the sheep having to do with their ancestory remains and the sheep is to taboo them. Thu the sheep's connection with their ancestry an the taboo connected with it, indicate that originall the sheep had been the totem of this tribe.[18] Th

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[18] Regarding the change of the Gotra by of these tribes, one the Bhumij, Risley says "It is curious to observe in a tri still in a state of transition, that one of the brahmanical got Sandilya, has been borrowed from the higher castes and in t process of borrowing has been transfered from a Vedic sa into a bird". Risley—"*Tribes & Castes of Bengal*" p—XLV.

The Bhumij whom I have interrogated at Bankura are g Bengalee Hindus, though in a low scale of social hierarchy.

Santals who connect Pankal and Sol fishes, Betel-nuts etc. with their ancestry count these things amongst their religious taboos. Of course every Santāl is not clear on these points. The fact is that they live amongst the Hindus, and learn much from them. Sometimes they try to imitate the Hindus or try to make a parallel case with that of the Hindus in their traditional matters. Hence some will say that this fish or that plant has got something to do with their ancestry, some will say these things are simply objects of veneration from antiquity with them. But all are one in saying that they abstain from the use of these things. Some will never say right things about their tradition before the Hindu gentlemen (perhaps they feel sensitive about their traditions). Truly they will mention the case of taboo and from it the investigator has to get at the idea of a totem. The same is the case with the Koras. In the case of the Cachāris, it seems, they are in the midst of a conflict. While they worship the Shaja tree which must have been a totem with them, they at the same time call themselves the descendants of Bhīma of Mahābhārata. Yet my Cachāri informants clearly told me that they were not Hindus.[19] It seems that as they are falling under the influence of surrounding Hinduism, they are engrafting Hindu traditions on their own.

Thus though with these castes and tribes the phenomenon of having an animal or a tree or a plant as the ancestor of the caste or the tribe not clear in every case, yet the fact remains th the act of veneration of these things and t sacrilege in the case of violation of the religi social prohibitive laws concerning these tabo clearly prove the case of totem and taboo i these matters. It seems to me that the things which are the objects of worship and veneratio had originally been the totems of these people and, as such, any sort of use was prohibited. B these people having gradually come in contact wit the Hindus, the totems lost their significance; in som cases they are remembered dimly, in others they re tained the usual act of veneration due to them This must have been due to the onslaught o surrounding Hinduism. The more these people began to come in contact with Hinduism, th more the totems began to be displaced by Hindu gotras and geneologies.[20]

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[19] But Eandle speaks of their conversion to Hinduism.

Thus though the totems began to lose thei original meanings and position, in many cases the septs bearing totem names and the prohibitive taboos connected with these totems stil survived. For this reason the desecretion or injury to such and such animals still remained in force And on this account it is still easy to trace th defunct totems through the taboos connected wit them.

Here the question may be asked, how are we to know that these objects have been the totems of these peoples when we know that the worship or the veneration for some trees and the prohibition regarding the eating of the flesh of some animals are also customary with the high class Hindus as well. Firstly, it must be said that these animals and the trees are neither the objects of veneration nor the taboos of the high class Hindus. High class Hindus will not refrain from eating the flesh of some of these animals tabooed by these peoples. Hence it should be said that these things are peculiar with these castes and tribes. And these belong to the totemistic system of the non-Aryan-speaking peoples. Secondly, according to the ethnologists the totems are closely related with the group of men with whom they are identified; hence engrafting from outside is not possible unless the society undergoes a change. And further, if the definition of the sociologist Emile Durkheim is to be accepted, totemism is the basis of uniting peoples into society. It acts as a uniting bond of a group of people. As he says, "Now the totem is the flag of the clan...since a religious force is nothing other than the collective and anonymous force of the clan, and since this can be represented in the mind only in the form of the totem, the totemic emblem is like the visible body of the god".[21] Hence the outside force cannot unite peoples into a tribe or clan. Also he says that those people who accept a common totem will refrain from eating the flesh of that animal of which the totem is the symbol. Thus, that totem will have its taboos too. And these together with form a religious belief of that clan, as Durkheim says, "A religion is a unified system of beliefs and practices relative to sacred things, that is to say, things set apart and forbidden." 21

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[20] A brilliant example of it is in the case of the Ahoms of Assam who have adopted Brahmanical gotras.

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[21] Emile Durkheim "*The Elementary Forms of Religious Life*" p—221.

Keeping these definitions of totems and taboos in mind it is evident, that the beliefs and practices of the castes and tribes mentioned in the paper relative to the things held sacred by them and forbidden to be eaten, must have been their original totems. But in the course of time coming in contact with Hindu culture the totems have lost their original significance and have shrunken as the objects of veneration only, and the taboo connected with them are still remaining in force from which one can yet guess the totems. *

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[21] Emile Durkheim—"*The Elementary Form of Religious Life*" p—47.

* This paper was submitted at the annual session of the Indian Science Congress, 1933.

III. DISEASE, DEATH & DIVINATION. in Certain Primitive Societies in India.

By D. N. Majumdar, M. A., P. R. S.

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In all societies, primitive or advanced, various charms are practised and amulets used. Change of habiliments to conceal the sex is practised in many advanced societies and the following protections against evil spirits and the evil eye are known throughout India, eg, iron and other metals, coral and shells, precious stones, blood, incense, salt, spittle, *urid* and other grains, mustards, tattooing, torn shoes, leather, garlic, glass, etc.

Birth, death, conception and pregnancy, initiation, marriage, agricultural operations such as sowing and reaping, construction of houses, first opening of houses and buildings, undertaking of long journeys and such other activities of the individual as well as the community are carefully watched and protected against the evil eye of miscreants and sorcerors by wearing amulets and charms, fixing auspicious hours and in various other ways seldom intelligible to unsuspecting minds.

All failures, disappointments, sufferings, pecuniary or material loss, are attributed to evil spirits who constantly struggle for mastery and control over the destiny of man, and receive the greatest attention from primitive society everywhere. Sickness or death is not due to natural causes but i brought about by the influence of malignant spiri who are eager to find out human failings. Eve natural decay is attributed to the evil eye or t spirits, and various devices are practised to protec the survivors from further attention from th latter.

The Veddhas leave the hut where death ha occured; the Polias of Northern Bengal used t do so till recently; and where corpses are buried or cremated, the path through which they are carried are strewn with thorns and grains charged with magical formulas so that the just departed soul may not come back and harm those it ha left behind. The soul that leaves its morta frame may not be at all harmful but the spirit or spirits that are in possession of the disembodied soul may use it in any way to chastise the survivors. The custom of placing flat stones to cover the remains of the dead, practised by the Mūṇḍā-Dravidian tribes, is a device to check the passage of the spirit from the grave for some time to come while the circle of stones made by the Koṛwas at the place of cremation is meant to hedge in the spirit for some time till it is freed by the survivors after the funeral ceremony.

Death from infectious diseases such as small-pox, cholera, *etc*, is seldom followed by cremation; but interment takes place in these cases and corpses of unmarried persons are also buried by the Bhūiyās. Women dying in child-birth are believed to transform themselves into malignant spirits; and delay in delivery as also other complications in pregnancy are attributed to these spirits. Amongst the Hos, such spirits are believed to sit on the breast of pregnant women and thereby displace the placenta. Children suffer from rickets owing to the influence of spirits who are but the disengaged souls of dead children. Consumption is due to holes in the lungs made by Rakti Bhowāni. Fever is caused by Bhowāni and a promise of some sacrifice or offerings to this malignant spirit is expected to effect a complete cure. Small pox or cholera are caused by Maharāṇī or Sitalāmātā and regular propitiation of these deities ensure the safety of the victim. Sacred groves or the Jahirās of the Hos are places where very old trees, the remnants of the original forest clad tracts, are preserved and no Ho would dare cut a tree without exciting the wrath of the sylvan spirits believed to reside in it. They are often regarded as the guardian spirits of the villagers; and sacrifice at these places or pouring of water on them is believed to have the efficacy of driving these epidemics out of the village area. Dysentry or vomitting blood is remedied by offering red fowl or the blood of sacrificed goats to Rakti Bhowāni or Sakti Bhowāni.

There are different spirits presiding over different crises of life, one over periodic fever, another over death and fatal diseases, one over Cholera, one over Measles and Poxes and the like. Gout, or Lumbago or Rheumatism is also attributed to the Bhowāni or such other malignant spirits and a few kicks at the back by a Baiga or Dewa

are calculated to cure the most obstinate atta
Death by drowning is always due to the influe
of spirits who are but the disengaged souls
persons who had met a watery grave. Such, f
example, are the *Kāchin bongas* of the Hos. T
malignant spirits have no fixed abode but hov
round in the atmosphere and move from pers
to person and place to place. The absence
any permanent abode of the spirits is significa
for it makes the spirits easily displaceable by t
Baigas, Dewas or Ojhas who are the witch do
tors of different tribes. All troubles, social
domestic or agrarian, are traced to the interferen
of spirits or deities which the witch doct
know. In some tribes the Baiga or the medicine-m
possess a crude knowledge of the efficacy of roo
and herbs, but they sometimes dispense filth
concoctions. The belief of the people in the
indigenous medicines is so great that they expe
a dose of the Baiga to cure immediately the mo
obstinate disease and thus discredit a medici
that must be taken repeatedly. They prefer t
medicineman and his nostrums to the train
physician and his prescription. Where they ta
any drug they cannot separate it from the char
believed to be associated with it. The dru
therefore receives its healing power or efficacy b
virtue of the incantations or formulas mutter
by the Baiga in the course of its administratio
The Baigas know the roots and creepers a
prepare the mixtures the composition of which i
therefore unknown to the people, so anythin

that the Baiga applies is a charm even if it is only an indigenous drug.

The influence of spirits is greatly overestimated and the faith of the people in witch-doctors is still unshaken in primitive societies. Where the people live in close proximity to urban centres, medical aid if sought may be had but they have no faith in medical practitioners; and in cases of epidemics such as cholera or small pox the village Dewa or the Baiga makes daily offerings to village godlings and Sitalāmātā to ward off the epidemics from the affected area. The nature of offerings varies according to the intensity of the epidemic. In the Koṛwā villages, the Baiga who is a Chero by tribe, makes a burnt offering with sugar and curds daily. In cases of fever, he prescribes certain roots to the patient, a decoction of which is believed to cure the fever, provided the spirit who has caused the malady has previously been appeased. Cholera amongst the Mājhwars is due to the wrath of a Dano who lives in the Banka hill, for whoever approaches the cave or its neighbourhood is seized with the malady. The disease or the epidemic is averted by Simuria who is regularly propitiated by the Majhwars. He is easily pliable but equally irritable and the villagers offer *ghee* and *gūṛ*, and sacrifice fowls at the junction of two or more village alleys and this is believed to ensure the safety of the village.

Fever amongst the Cheros, Panikas, Majhwars, Kharwars, is due to a number of spirits, eg, Bhowani, Jalamukhi, Ghanashyam, Dechria, Simuria, Churail, Rakas, Sadhok, Mahdani, Balsadhok, Rak Bhowani, Kachnibhowani, Burah Deo, Banaspat Dano, Rajah Chandol, Atbhuji Devi, Angarmat Burimata, Jalnimata, Kodma mata, Sairi de and numerous other spirits the witch doctors know invent. Of these spirits some are by nature beneficen others are malignant but though they are afra of the malignant ones whom they propitiate wit sacrifices and offerings at stated periods, they ar equally anxious to administer to the needs of th former for they hold that as a mother is ofte annoyed with her children and punish them fo their offences, so the beneficent powers also chastis them whenever knowingly or unknowingly th setablished ussages are violated.

The spirits who influence the life of th Tharus are said to haunt peculiar places, som dwell in tanks, rivers, whirlpools or hills, others haunt Ber, Semar or Peepal trees, the burial ground, the junction of three roads, the deserted house or some specified area in the village and each particular spirit is believed to preside over a particular department of tribal life. The traditional belief in the activities of these spirits and godlings, their meddlesomeness in human affairs, their power to do good or harm assure their abiding place in the social life of the community and consequently there arises a set of ideas, images, concepts, feelings, cults, devices and rituals which help the primitive man to tide over critical stages of their life.

Fever in women and children among the Korwās, is believed to be caused by Churail which is a female spirit and extremely mischievous. She has no fixed abode; she takes her temporary abode on the branch of some tree on the outskirts of a village and when a woman or child passes under that tree, she descends upon the victim and causes this malady. The extreme manifestation of her wrath is experienced when the victim suffers from spasms and delirium and in course of the latter, the affected person gives out the identity of the spirit and the manner of possession. But Churail is easily displaceable. The smoke of burnt chillies drives her away. Sometimes a forcible shake also dispossesses the affected person. Churail is the same as the Churing Bongas of the Hos, which are the spirits of women dying in child-birth. Women are in constant dread of these spirits and they take special care to propitiate them regularly with offerings of liquor and blood of red fowls. As Churail is the spirit of a person dying in child-birth, so Balsadhoks are those of still born babes who harm the new born ones without sufficient provocation. Khichuri, fowls and sometimes bread are offered to the latter. They haunt tanks, big trees, bathing ghats and places of evacuation where their victims are found to resort. Jalāmukhi is a benign deity with the aboriginal population of the Dudhi estate as well as neighbouring areas and she with her consort Ghanashyam Thakur has a temple dedicated to her in every village. Whenever epidemics sweep away the villagers and their cause cannot be divined, prayers are offered at the village shri and blood of sacrificed fowls or goats is offere to the deities as the price of protection. Th most dreaded and mischievours spirits are the thre Bhowānīs, eg, Bhowānī, Rakti Bhowāni and Kach Bhowānī who are the pet spirits of the witche and are met by the latter every night unde cover of darkness and are instructed by them t chastise the villagers for petty offences, real o imaginary. The Baigas, Ojhas, Dewas, Bharār and Bhōpās are sometimes unable to trace th haunts of these Bhowānīs and the witches wh set them against persons and things; but ther are certain conventional methods of ascertainin the causes of the attack of the Bhowānīs whic make a compromise possible.

The number of Bhowānīs is constantly on th increase and the whole atmosphere is surcharged with these evil spirits. Every witch controls quite a good number of Bhowānīs and this facilitates his *modus operendi*, so that it is indeed difficult to trace the source of her attack. Besides there are two distinct types of Bhowānīs, one is set against persons and the other against cattle. The Bhowānīs who are made to harm cattle have separate jurisdictions and are stationed at four corners of the village. They sit on the shoulders of cattle and goad them to the forests where they are left unprotected to be devoured by wild beasts of prey. This is done to effect material loss to the people who have already been affected physically by the Bhowānīs.

All diseases are ascribed mostly to the evil influence of spirits and sorcerers who are prone to find out human failings and chastise men for real or imaginary offences against the spirits or their patrons. Diseases may be broadly divided into those that grow from within the body and those that are due to external physical causes. The latter includes all external sores, bruises, cuts, fractures of bones etc, while the former refers to fever, pox, measles, cold, consumption, cholera, dysentry, vomitting etc. The internal diseases however are caused by the witches whose *modus operendi* we shall examine below. We have enumerated above a number of common ailments and the beliefs relating to them and we shall in this chapter discuss some of the important processes by which diseases are caused by the witches. We have also seen that the spirits and the witches who are believed to control them, are sometimes conceived as identical and thus the spirits enter the body of the witches and identify themselves with the activities of the latter. But in most cases, however, the spirits have to be invoked by the witches and vows of sacrifice and sometimes regular propitiation of these spirits are regarded as essential to bring the spirits under the control of the witches. There are among the Koṛwās certain witches who have some pet spirits at their command and these spirits are so familiar and friendly with the former that little or no exhortation or persuasion is necessary to engage these spirits for nefarious purposes.

In ninety cases out of a hundred, the vict of a disease will tell you the reason for t trouble and will resort to the Dewās, Bhaga Bhopās and Bharārās who are the witch docto of the people. The latter will seldom questio the imaginary part played by the witches or th spirit believed to have been offended and wi proceed in a conventional way to divine th source of the attack. As soon as the divinatio is finished, the witch-doctor goes to the affecte person and tells him or her how such and suc offerings are desired by the spirit and the perso is sure to be cured if he or she will offer the to the spirit. The offering is seldom denied an the witch-doctor is instructed to propitiate th spirit as directed by him. This divination i very often corroborated by the patient who soo gets possessed and in the course of the possessio gives out the name of the spirit and how it has overtaken him or her. This is made possible, perhaps by continued fasting and singular concentration which follows the divination by the witch doctor. The witches in primitive society are conceived to be anti-social in their motive and action and thus are dreaded like the 'Bishāhas' of of the Orāons.* The social life led by the witches gives them little scope for becoming philanthropists and they can therefore be easily goaded by the spirits to act as agents of malice and anti-social activities. With little or no interest in life, with all ambitions frustrated, and leading, as they are accustomed to do, a life of scorn and hate, it is no wonder that they extend their cordial hand to the beings of the unseen world who must necessarily be their companions and friends in the life after death.

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* Roy, *Oraon Religion and Customs.* pp, 261-262.

The processes by which the witches are believed to cause disease and death amongst the primitive tribes in India may be interpreted as contagious magic practised in elaborate detail. The Koṛwās when they want to do harm on some alien individual would make an effigy of powdered rice or wheat flour and would prick the effigy with thorns in the certain belief that the intended victim will suffer similar pricks, the result being boils and sores all over the victim's body. When a particular person among the Koṛwās has to be killed, the witch is believed to keep awake on a certain new-moon night and with the help of a knife or a scythe, cut into two pieces an effigy made of straw or of pounded rice. The Hos believe that the witch, if she want to kill a man, must shoot an arrow at the supposed effigy of the man or his shadow. But the man thus acted upon will not die suddenly but will develop consumption which is believed to cause holes in the lungs and the victim dies a terrible death.* The arrow is generally shot at night without being detected, so that the victim may be taken by the disease unwares. This method may aptly be compared to the custom of sacrificing the enemy ceremonially before the goddess Pārva certain parts of Bengal. On the third day of the D Pujāh, i.e, on the Navamī day, when the regular prescribed sacrifices for the day have been m a doll of powdered rice in a piece of bark of banana tree, is placed on the sacrificial altar all the members of the house assemble to o this as a sacrifice to the goddess. This is kno as *satrubali* or the sacrifice of the enemies. T head of the family or the *kartā* takes the in his hand and uttering certain incantati prompted by the priest, cuts the doll clean i two halves, the rest of the family members, m women and children, touching his person while the act of striking at the effigy. This is belie to scare away evil spirits and to destroy enemies of the family and give to the memb an immunity from unforeseen calamities.

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* Vide *J. A. S. B.* Vol xxiii. 1927, pp, 42-43.

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There is another method by which the witch can inflict disease but this method is rar practised as it is a direct method and is attend with risks. Most of the witches possess a f knowledge of vegetable poisons which they c cull from the forest but they know their an dotes as well. When the witches want to crea trouble and chastise people for particular offence they administer these poisons with food and wh the victim suffers from the effect of the pois and if they want to bring him back to life, th witches come to the victim's place and use th antidote which the people take as an indigeno drug powerful enough to fight the disease.

particular Revenue Officer on his way to the headquarters in the state of Gharwal once forced a Rawaltta woman to provide grass for his horse, the latter protesting. The officer was persistently requested by the villagers not to compel her for fear of some personal harm as she was reputed to be a witch. The officer did not listen to the remonstrances, and the result was that the horse fainted and dropped down dead. It was after a good deal of entreaties and supplications that the witch was persuaded by the villagers to bring the horse back to life.

A fourth method by which the witches can bring about diseases and thus chastise people is to act on certain things which once formed a part of the person, as, for example, nails, hair, spittle etc, or some articles which the person uses constantly as cloth, ornaments, weapons etc, or things which are trodden upon by a person or even the dust of one's feet. The effect of magical formulas which the witches cite to invoke the spirits which are believed to be under their control varies according to the importance of these articles to the victim. Thus the witches among the Hos will procure hair cuttings and pairings of nails of the intended victim, bury them in the courtyard for a week or so and, on a new-moon night, dig them out. The floor of the hut will be swept clean and ashes will be spread in the circle previously drawn on the floor. Then the witch will burn some dried faggots inside the circle and when the fire blazes up, throw the hair or nail clippings into the fire to be burnt. Thrice the smoke will be swallowed by the witch and i cantations and formulas will be recited. Wh the fire is extinguished, she will collect the ash in a new earthen pot and preserve it in a corn of the hut or will make it hang from the that of the roof. The next process is of cour attended with risks and the witch has to tal all precautions to ensure the proper administratio of the nostrum. The ashes which she has pr served in the earthen pot has to be mixed wi some food which the victim will savour. It i generally mixed with rice beer which is free drunk by the people and which is the mast im portant food and drink of the primitive populatio in Chōṭā-Nāgpur and adjoining areas. It sometimes mixed with fruits which are collecte in the forest and which are distributed freely b the villagers, such as wild plums, *mohua*, black berry and the like. Such is the magic of th dust that only the victim whose hair or nail ha been thus burnt, if he or she partakes of it, wil suffer and not others who may unsuspectingly drink or taste them. The first symptom of th attack will be sneezing by the victim, not onc or twice but in succession for a considerable time, which will at once indicate the power of some witch over him; and he will resort immediately to some Baiga, Bhagat or diviner to know the root of the trouble. But it very often happens that the victim pays no heed to it and thus the next stage of the disease, that is high fever, dysentry or nausea comes unawares to him. Then of course he will call the witch-doctor to divine the source of the attack and, if possible, to estimate the terms of compromise with the offended spirit which has been set by the witch against him. The divination will bring about no doubt a compromise when the sacrifice desired by the spirit is offered and a promise of occasional propitiation is made to the spirit. In most of the cases the disease leaves the victim as soon as the sacrifice is promised but there are spirits who insist on the sacrifice first and then the malady is taken off. In those cases where even after the sacrifice the disease does not take a hopeful turn, the Baiga is taken to task by the victim for he must have omitted some important rites in the course of sacrifice and the former has to undergo certain rites which are interpreted as penance for his acts of omission and commission and the victim is sure to come round.

Amongst the Rawalttas of Rawain, the witches are believed to act through food and thus seldom do they dare take cooked food prepared by strangers. Curd is a popular food of the locality, so it is through curd that a witch can easily exercise her evil influence on any person partaking of the same. They never take curd without salt as it is believed that if it is acted upon by some witch the mixture will turn red. What the witches mix with the curd and other items of food has not been ascertained but it is possible that some such principle is in practice amongst these hill men.

The witches are also believed to cause disease or calamity to individuals, families or the entire village by promising sacrifice to the familiar spirits. This is done by means of the spirit-bundle consisting of bones of fowls or other animals that are promised as sacrifice, potsherds, grain charged with magical formulas, broken pieces of ornaments, torn rags dyed with red ochre, etc, which are carefully buried in a corner of the courtyard of the intended victim, or in the burial ground of the particular family or in the spot where the village godlings are regularly propitiated by the priest. This is followed by continued fasting by the witch for a number of days till the desired effect comes to pass. The villagers believe it to be the most effective means of bringing disaster or calamity to individual families or the entire village; and on this account they have to keep watch over the suspected witches of the village and their activities.

The two other processes by which the witch can bring about death or deformity in an individual or a particular family among the Orāons have been described by Roy. * The first is an application of the recognised belief that the witch in her communion with the spirit or spirits acquires a kind of second sight which enables the witch to see through the body of the victim. Thus the witch amongst the Orāons can kill a person by extracting the heart of the victim through magic spells on the *Sohorāi Āmāwas* night and packing it up in a bundle of *pipar* leaves and fixing a day for the death of the victim.

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* *Oraon Religion and Customs,* by Roy.

The victim is believed to pine away and succumb on the date so fixed. And all deaths among the Orāons or even among the animals domesticated or wild, where no apparent sickness is perceived, are ascribed to this process which enables the witch to extract the heart out of the victim's body.

The second process has been described by Roy in the following words:—"The witch takes the form of a cat and in this shape the witch enters people's houses, licks the saliva trickling down the corners of the mouth of some sleeping person or bites off a lock of hair of a sleeping person and the unfortunate person falls ill or his hair falls off. Even if the witch in this shape throws her shadow on a sleeping person, the latter suffers from a nightmare. In the same shape of a cat, the witch is believed to enter people's houses at night and mew in a plaintive strain and as a result some calamity is sure to overtake the family. If such a cat (*chōr dewā*) can be laid hold of or killed or its leg or other limb broken, the witch too, it is said, will be found dead at her home or maimed in her leg or other limb, as the case may be." This idea perhaps is responsible for the belief which the Hindus still have, about impending calamities in particular families as a result of the plaintive mewing of a cat or the barking of a pet dog at night on the threshhold of the house. The role of the witch is done away with but the danger is apprehended all the same, which may be a survival only.

We have so far discussed the processes which the witches bring about disease or calami to individuals or particular families, but there a processes by which an entire village or a *pārh* might be affected. This method is usually employe to transfer a disease or epidemic from one villag to another and is commonly taken recourse when cholera or small pox or plague breaks o in any particular area. The first attempt to fig the imported cases of pox or cholcra is to off sacrifice to the goddess presiding over cholera o small pox. Stray cases are believed to be cure and the extent of the infection effectively checke by such propitiation, but when it takes a virule turn and multiplication of sacrifices even does n bring about any appreciable change in the cou of the epidemic, the villagers assemble togeth at the house of the village-priest who make promises of more sacrifices to the goddesses pre-siding over the diseases, chanting vocifero incantations and formulas. A red hen is purchase by the villagers by contributing each a handf of *arua* rice and the bird is offered by the pries to the goddess as an earnest of the sacrifice that are promised in case the sufferings ar redressed. When the hymns and formulas hav been recited and the rites have been performed, th hen is touched by all the villagers present an then taken round the village by an elderly member of the scavenger class who has settled i the aboriginal villages or, in his absence, by a member who is maimed or deformed and the again brought to the courtyard of the priest

The priest who was wearing a red rag, tears off a strip from his *botoi* and ties it to the left leg of the hen while the rest of the villagers go home and come back with *sōṭās* or sticks in hand. Like the Bonga Hanr ceremony of the Hos on the last day of the Māgē festival, the villagers assemble at the outskirts of the village with the hen carried in front of them and begin to chant prescribed hymns and incantations which are unintelligible even to the people themselves. The hen is then dropped down from the arms of the man who carried it and all the villagers charge the poor bird with sticks and stones, checking its passage to the village. The hen is thus driven to the neighbouring villages and by so doing the villagers believe to be immune from further havoc of the epidemic. This is usually done at dead of night, so that other villages may not detect them, for, if they do so, there will be feuds between two or more villages. The poor bird is generally driven miles to reach a new village, the members of which might be unaware of the epidemic in the vicinity. But villages situated in the neighbourhood are particularly anxious to see that no stray birds enter the viliage area and during epidemic times, each village keeps men posted at different approaches to the village day and night to sec that no such bird enters the village boundary. Sometimes it happens that a group of villages assemble together and repeat the process for common good and drive the bird to a distant village where the rag tied to the leg is separated from the bird and thus no tra of its being secrificed is descernible. Thus a villa or a group of villages or *pārhā* is seen to c operate and act in unison for common intere and thus testify to the social solidarity of t village, clan or the tribe.

The two classes of intermediaries who a reputed to possess a knowledge of the unse world are witches and their doctors. The form are the patrons of the spirits and are credited wi mystic connection with the latter. Every H village in Kolhan is said to contain a number these witches who assemble at night under a b banian tree or tamarind tree outside the skirts the village where they set up a nocturnal dan in honour of particular *bongas* or spirits who they control. Anyone passing by them at nigh is sure to be molested and killed; and the bloo is offered to the *bongas*. During this communio with the spirit, the witches get possessed, whe they are asked by the spirits to chastise this o that person of the village who might have, someho or other, incurred the displeasure of the spiri Though the witches are credited with the contro of spirits, in fact it is the witches themselve who are subservient to the epirits. The Korwa will not ordinarily pass under tamarind trees a night without sufficient excuse and when the have to follow a route where tamarind trees occu they throw grains charged with magical formula on all sides when they approach these trees an seldom look round. This attitude may be trace to the belief in witches assembling under the trees under cover of darkness either to minister to the physical needs of the spirits or to take orders from them.

The witches among the Rawalttas are seldom known to the people for they are very skilful in concealing their identity. They are believed to be in possession of some spirits whom they use for good or for evil, usually the latter. They are believed to possess superhuman powers and can consume the substance from within a lemon without touching the outer covering of the fruit. In the same way the witches can kill a person without his knowing it.

It is indeed doubtful whether the witch-doctor or the witch has any definite idea about the beings supposed to people the atmosphere as is manifest in the conventional method in which they proceed to interpret human activities and processes of nature, resulting, as it were, from a course of events in savage society whose causal connection is seldom questioned. But the spirits who are believed to influence the course of events in savage society are conceived as powerful beings who depend to an appreciable extent on human ministrations and, whenever the latter are not forthcoming, become so restless that they goad the people to a subservience which ensures the continual flow of sacrifices and offerings to themselves.

Nor is the knowledge of the spirits received first-hand by the witches. There is no direct communion with the spirit or spirits whom the witches serve. The training which is demanded of a woman when she enlists herself in the ranks of witches is such that gives her little first-hand knowledge about the beings whom she wants to invoke. The process of training of the witch and the witch-doctors are generally the same but there is yet a difference; the witch learns her trade in secret, the witch doctors train apprentices in public. Fasting, concentration and possession are the characteristic processes through which the witch as well as the witch-doctors get to the fountain of spirit lore. Persons who are hypernormal or of abnormal mental activities are the best intermediaries between the two worlds and thus serve as links between the human and the unseen world; but there are also intermediaries who are suspected to be born with the evil eye or the evil mouth.

In most of the primitive societies in India, particularly among the Mūṇḍā tribes who inhabit the secure plateau of Chōṭā-Nāgpur, it is the women who are witches but all women cannot be such. It is only women who are barren, who are without child or who are aged and infirm or who have lived long as widows that can communicate with the spirits and become votaries of evil spirits. Whenever there is any crisis in primitive society, whether in the shape of epidemics, failure of crops, diseases or death, they associate it with the witches and suspicion at once falls on such women, but attempts are seldom made to identify any woman with the crisis for fear lest the witch might set her familiar spirit against individuals or their families. It it only in extreme cases that a man will accuse a certain woman with nefarious designs. A typical example was furnished during the last revolt of the Larka Kols in Chōṭāṇāgpur, when the Kols were defeated and brought under the British crown. When the military was withdrawn from the area occupied by the Larka Kols, one morning all the Kols met together to divine the cause of their humiliation and it was suggested by some that all their miseries owe their origin to the witches. When this was agreed upon, the next morning hundreds of such women were mercilessly put to death which no doubt ended their miseries.

Fecundity of women is regarded as a powerful factor in determining the power of the woman to resist the manouvres of spirits. Delay in delivery or extreme pains in the course of child-birth is traced to the influence, direct or indirect, of spirits but once the child is born the woman is regarded us immune from further attention of the spirits. Barrenness in most of the tribes is ascribed to bad morals and sins committed in previous births, but it may also be traced to the use of indigenous medicines to prevent conception, which may have some prejudicial effect on the reproductory system. Again most of the societies here referred to recognise the difference between fertile and infertile groups—women who multiply and thus add to the strength of the tribe and women who being infertile serve no very useful purpose to the community and are prone to anti-social activities.

It has been said that the witches are trained in secret. But there is hardly any tribe who can positively trace the haunts of the witches and if any individual happens to know the traini ground of the witches, he has to keep the sec on pain of death. Thus during the noctural da of the witches among the Orāons, should any i quisitive man happen to meet them, he is warn on pain of death not to speak to any one of wh he may have seen or heard. * But the witch are not satisfied by extracting the promise, for th intruder is shadowed for a considerable time, a should he prove faithless, he is chasticed and p to death. They also wipe off by means of spell it is said, all traces of footsteps or other mar of the witches' dance before dawn. Thus th horror of chastisement acts as a deterra to publicity, but every tribe or every village h a vague idea of the training arena which is locate at some sequestered plot usually away from huma habitations, where, on certain dates of the year the witches collect and dance and sing and chan the incantations which give the power to do evil formulas which when recited bestow on them kind of second sight which it is said enable them to see through the body of their intended victims and to choose magical instruments such as th broomistick or a rag, a potsherd or grains whic obey their command and can be used in any conceivable and inconceivable manner. Thus among the Mūṇḍā tribes witches of different villages on new moon nights, particularly in the month of Kartik, at dead of night. assemble in the vicinity of the village but away from the principal thorough-

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* *Oraon Religion and Custom.* by Roy.

fares, in some cases, in the midst of the forests where there is hardly any chance of any villager passing at that hour, strip themselves of their clothes, and begin to dance the weird dance of the witches till twilight. Novices are initiated on these occasions into the mysteries of witch-craft and are shown the efficacy of the spells and incantations of the witches; powerful witches are said to demonstrate their magical powers, either by uprooting a big tree in the neighbourhood and removing it to a distance or creating a storm or bringing down torrential rains. As in the case of the Hos, most of the witches of cognate tribes have a number of spirits at their command who are not ordinarily known by the villagers, but they can also invoke spirits who are regarded by the villagers as harmless or malignant by offering sacrifices to which they are believed to respond at once. Thus the witches among the Oraons, as S. C. Roy puts it, enter into communion with the spirits that ordinarily receive no sacrifices such as the spirits of the ancient dead and such spirits as Hankar Bai and by tempting them with vows of sacrifices get their nefarious designs on others executed with the aid of these spirits.

A few words about the representation of these spirits will no doubt be of great help in realising the conception of the spirits in primitive society, who are described to be animistic and believers in shapeless and impersonal forces. The representation of spirits in the different areas under investigation varies in different tribes but nowhere are they conceived as impersonal or shapeless as interpreted by some authorities. The witch who is credited with the possession of some spirit whom she sets against persons and things, is generally identified with such spirit and the appearance, gait and movements of the witch are understood to be the same as those of the spirits whom she controls. The spirit who is believed to be old is associated with a witch of the same age and a young but barren woman is identified with *churail* while the face of a still-born babe is taken as a representation of the *balsadhok* which is a disengaged soul of a deceased baby. The female spirit that presides over village groves is an old lady who possesses a crooked figure and matted white hair and is seen moving on her crutch from village to village where she is wanted. The abodes of these spirits are known to the aborigines, the trees and hillocks which are their haunts are specially regarded with awe and reverence and the shrines that are found in villages contain crude representations of seats usually affected by these spirits. The temple of Jalamukhi is constructed by erecting six pillars over which is placed a shed, conical in shape, made of bamboo and thicket. On the floor is drawn two small circles, not altogether closed, one to two inches thick, with an outlet to the west which forms a link with the dais of the priest who offers secrifices at regular intervals. The forms and functions of spirits are revealed in dreams or trances and are different in different localities. But there exists everywhere a tendency in savage society to objectify the subjective conception of these spiritual entities which are believed to pervade the whole atmosphere.

Stories are current in savage society how particular persons belonging to different tribes miraculously entered the kingdom of spirits and how wonderful were the sceneries there and the appearances of the witches in their gala dress while engaged in dances and festivities under the river or inside the unknown caves of distant hills. Years ago, a Mājhwar also had a similar experience under the Kanwar river on the extreme boundary of the Mirzapur district where it is separated from Palāmau. It was the rainy season and the river had swollen owing to the showers of the previous day. The Mājhwar was to cross the river, for his home lay on the other bank of the Kanwar. The boat-man had left his post, for the night was dark and the current was strong. The fear of lightening, the dread of wild beasts and the thought of his beloved who were anxiously awaiting his arrival, led him to jump into the flaming surge of the gaping stream and he was poised on the top of the surges, but knew not where he was being carried. The struggle continued and with the lapse of time he was gradually feeling the approach of the inevitable end. As soon as he lost all control of his limbs the stream behind him came rolling on and a huge wave passed over his head and he lost all consciousness. How long he remained in that state he had no idea but when he next recovered his senses he found himself in an enchant land, surrounded by a number of young girls deck with flowers, each with a plate containing som delicious sweets and all imploring him to tas the delicacies. He was extremely hungry and h took food from the plates, one after another unt he finished the last plate. When he had th refreshed himself, he was conducted to a big pala and he entered the big hall of the palace whe he was garlanded and led to a *dais* where h found, seated on golden seats, a group of beautif damsels, their legs resting on coils of serpent He had heard of the Nāgbaṅsi Rājputs of Chot Nāgpur and he thought that this was perhap the kingdom of the Nāga Rājās, so when he w asked whether he wanted to stay there and pa the remaining years of his life in that happy lan he at once refused, for he wanted not to desert hi family and remain in the kingdom of the Nāg Rājās. However he was asked to lie down in corner of the room where a golden cot was place and the rest of the maidens left the room. Her he was soon overtaken by sound sleep but whe he awoke, he found that everything had vanishe and he was on this side of the Kanwar whic he wanted to cross. As soon as he came to hi own village he related this story to all the villager and since then, the swelling of the tide in th Kanwar or any of the neighbouring streams i taken by the Mājhwars as due to the dance an festivities of the spirits under the river or insid the caves of distant hills. Before we essay t interpret the beliefs and practices connected wit sorcery and witchcraft, we should discuss some of the typical methods practised by the witch-doctors in ascertaining the causes of spirit possession.

A *bharara* among the Thāṛus takes an ordinary metal plate, puts a handful of *urd* in it and having placed it in front of him, sits in deep meditation for a few minutes. He closes his eyes and mutters some formulas. This is continued for some time after which he begins to put the grains in pairs on the plate and during this operation he calls out the name of a particular spirit which he believes to have caused the mischief. If the grains in the plate count even the spirit thus named is not the one offended but if the grains count odd there is little doubt that the particular spirit has caused the malady or misfortune and has to be propitiated by sacrifices and offerings. In cases of minor troubles, such as had-ache or stomach pains, the *bharara* cites certain incantations or *mantrams* and shakes his right hand to and fro seven times near the face of the sufferer which at once brings relief to the latter. Sometimes to exorcise a spirit he makes an ordinary bow of bamboo and waves it seven times over the person possessed which effects an instantaneous cure. To cure fever, he keeps two pieces of torn leather one under the patient's head and the other under his feet, a *tāwā* or an iron disc to bake bread near his head, and burning coals on the other side of the cot near the patient's feet.

The spirits among the Rowalttas are said to enter the person of the people whom they want to chastise and the latter show signs of being possessed. The Rawalttas seek the help of *bāk* who are believed to be possessed at times t beneficent gods. Such a person will be called : and will invoke the god to enter his body. Th the god will ask the spirit possessing the perso what it wants. If the god thinks that the demand are not unreasonable such as some food, etc, h would ask the people to give these things to i and will commend it to leave the person. If th spirit is obstinate the *bāki* will take some grain of rice in his hand and will mutter some incar tations over them to make them charmed ar will strike them at the possessed person. This known as *Tara.* He will make loud and vocif vous sounds aud will threaten it with chastisem and will go on striking in the same manner t the spirit gets frightened and leaves the perso If it is driven in this way, only a food prepara tion called *kichro* (rice and pulse cooked in oil) will be offered to it. Then the *bāki* will give some grains of rice to the person to keep them with him in order to protect him in future.

The method of divination practised by these intermediaries amongst the Hōs may thus be described. At night the witch-doctor sits in a room beloning to the family of the affected person with all the male relations and friends of the latter and a *cherāg* (lamp) is lighted in the room. The witch doctor sits in front of the *cherāg* and takes a handful of barley and informs the inmates of the room that he will take the name of the spirits one after another and cast lots which will decide which of them is responsible for the mischief. The lots are cast for a fixed number of times in favour of each and if every time the condition is fulfilled, the particular spirit must be propitiated by sacrifices and offerings, as prescribed by him. Next he spreads the grains on the floor, and naming a certain spirit, calls out that if five times the grains are even or uneven, the spirit who is called out, must be responsible for the mischief. The process is therefore repeated five times or more as previously agreed and if on all these occassions the condition is fulfilled that is the grains count even or odd, it leaves no doubt in the minds of the assembled persons that the particular spirit has coused the malady. If unfortunately, the condition fails even once, the name is given up and a second name called out and this tedious process continues till day-break. In case no definite conclusion is possible that night the divination is postponed and is continued next night. When the name of the spirit is ascertained, it remains to find out the remedy for the distress and that is also done in the manner thus described. For the witch doctor again will cast lots to learn the favourite offerings the spirit would like to receive so that again that elaborate process is repeated.

In Mouza Rajhkhar, Dudhi estate, district Mirzapur there is a *deoghariya* or a house of god, presided over by a *bhagat* or diviner, whom I had occasion to visit during my ethnographic tour in that place. The secrets of the *deoghariya* are carefully preserved and publicity is believed to be ominous to the informant. It was with great difficulty that I could persuade the people of the village to show me the processes of divination performed in the *deoghariya* and early in the morning I reached the place and there I found a crowd of persons waiting at the entrance to the hut. It was a small low hut made of mud, covered with thatch without any peculiar shape or any prepossessing appearance to attract the attention of an inquisitive tourist. As soon as I reached the place my intention was interpreted to the *bhagat* who with great reluctance condescended to permit my entrance to the hut. Every morning he usually enters the *deoghariya* to answer the *saoals* or questions of distressed persons who come from miles away to know the nature of the possession and the prospect of a compromise with the offended spirit. Before I could enter the hut I had to take off my shoes, wash my hands and feet and was asked to approach the room in a spirit of reverence. When I entered the hut, I could discover a raised structure occupying half of the room and on this *dais* were a number of weapons such as a metal sword, a big stick, a small trident, iron tongs and also a number of musical instruments such as brass cymbals, *mandlā*, (drum) *nagerā* (drum) etc. The sword possessed a blunt edge which minimised the risks of experiments as I discovered later. To the left of the *dais* was a crude wooden model of a temple with spiked domes at the top, the floor of which was covered with a leopard's skin which served as carpet. On all sides of the mud-wall marks of vermilion had been made to add to the mystery of the room, for the marks were arranged in such a way as to present the appearance of a garland. On the inside roof of the hut were kept two broomsticks, a fan made of peacocks' feathers, two or three winnowing baskets and one small shield. The *bhagat* was a young man of about twenty-five or thirty, a Chero by tribe, his hair hanging in curls all round and his appearance showed him to be a nervous and irritable person accustomed to an austere life, but his sharp eyes revealed his intelligence and shrewd suspicion of my motives. When we were comfortably seated inside the room he began his customary weird processes, which he performed with commendable skill, as we discovered later on. A young boy aged ten to twelve, was sitting by his side, busy preparing tobacco which when ready was respectfully handed over to him. He smoked and smoked till the smoke darkened the whole room. When the room was completely filled with smoke, he began to play with the cymbals while the boy was instructed to play with the drum. In a serene mood the *bhagat* began to move his head to and fro, the curls were made to complete a rotatory movement and gradually with the increased speed with which the instruments were played the head began to shake in terrific commotion. He seemed to lose all his consciousness, took the sword that was lying by his side, grasped it with his trembling hand and began to brandish it in a violent manner which gave the impression of an assassin at work. He first attempted to cut his throat; next he tried to pierce his belly from which he drew out and moved the sword to and fro as if he w fighting with a shadow—apparently his own. So his head drooped down, he lost his grip, the swor fell down from his hand, the tongue came ou the eyes opened wide and he simulated death. This was the final stage of the drama he perform every day, for in the next few minutes he recovere and was a different man altogether. He assume his upright position, drew the tongue in, th hairs were removed from his forehead and h spread his hand to get hold of the *chillim*, whic his assistant had kept ready for him. Again h begun to smoke, with a smile on his lips whic possibly meant success and the smoke in r again darkened the small room. The next gestur from him indicated the arrival of a spirit insid his own person for he declared that he was th *baba* of whom we could ask questions. The *bab* (for the *bhagat* was non-existent) answered all the *saoals* or questions put to him and in every case he gave out the name of a particular *bhawāni* who had caused the malady or mischief and on each occasion he prescribed a certain procedure which was nothing but an estimate of the quantity and number of offerings and sacrifices which could satisfy the particular *bhawāni*. The causes of the troubles were also explained and in most cases the offences were of extremely trifling nature. The compensation prescribed was offering of liquor, *gūṛ*, and *ghee* and sacrifice of a fowl or two, a goat or a pig according to the gravity of the offence. The people who came for redress, addressed him as *bābā* and not as the *bhagat* for it was a metamorphosis which they felt and realised. Though the *bhagat* was the same to me, he was addressed as *bābā* after he had pretended death and took the role of the spirit-diviner. The fact that struck me at the moment was that after the metamorphosis which was effected within fifteen minutes the *bhagat* showed no signs of possession and was calm, passive and normal. He had a vessel of water before him in front of which he assumed different poses at different periods and he studied the reflection of his face in the water before he answered the *saoals*. Sometimes he would speak with his own image in the water repeating the questions he was asked to solve and after a pause of a few seconds answer always in the third person. But the *bābā* could reply to all the questions put to him and, when he could not, he frankly admitted his inability saying that he had no information on the subject.

IV. THE MALERS OF THE RAJMAHAL HILLS

By Sasanka Sarkar, M. SC.

Geography.

The Rājmahal Hill range occupies the north eastern portion of the Santāl Pārgānās. To the south-west it continues more or less along with the same range to the Māndār Hill, which lies 32 miles west of Bhāgalpur. This hilly tract extends as a matter of fact up to the Rāmgarh Hills in the district of Birbhoom in Bengal. The district of Santāl Pārgānās is divided into six sub-divisions which are as follows:— (1) Goḍḍā (2) Rājmahal (3) Pākuṛ (4) Dūmkā (5) Deoghar (6) Jāmtāṛā.

People.

The Mālers occupy the solpes of the Rājmahal Hills. At places the hillmen have come down to settle on the foot of the hills but in the main the Mālers restrict themselves to the north of a line drawn from Pākuṛ to Goḍḍā (25°15′ N. latitude, and 87°3′ W. longitude and the southern limit is 24° North.) The south of this Pākuṛ-Goḍḍā line is inhabited by another tribe known as the Mālpāhāṛiās. These people live on plain lands. The relation of these Mālpāhāṛiās to the Mālers is not very close just now but there is no doubt that the former is an off-shoot of the latter. The Mālpāhāṛiās have partly absorbed Hindu culture and they speak a dialect, which is nothing but an admixture of Bengali, Santāli and their mother tongue, the 'Malto'.

Language.

The Mālers speak Mālto, a language which is classed under the Dravidian family. On linguistic grounds one is tempted to connect them with the Orāons, a tribe speaking Kuṛukh, which is also classed under the Dravidian family. The Orāons and the Mālers both speak a Dravidian tongue, whereas they are surrounded by a large group of people speaking the Mūṇḍāri dialects.

The importance of Pākuṛ sub-division.

Pākur is the place where the actual contact of the two existing cultures of the Mālpāhāṛiās and the Mālers are met with; particularly in the Pākuṛ-Goḍḍā tract, a great deal of borrowing has occurred between the two tribes in all aspects of their culture. This has been due to the advent of the carriers of civilization in the interior parts of Pākuṛ. In contrast the Rājmahal sub-division is unaffected which is due to the inaccessibility of the interior parts of this reigion. The hills are higher than those Pākuṛ and the automobile services have not yet been opened.

Dress.

An adult male Māle wears only a strip of loin cloth between the legs, the two ends being fixed under a string on on the waist. Some wear a turban on their head. The chiefs (*sardārs*) are always dressed in a better style than the common people. They wear clothes in the fashion of the Sāntāls of the plains. A woman's dress is somewhat peculiar. A considerable change in the mode of wearing is observed at different places.

The native type appears to be restricted to th interior parts of Rājmahal sub-division. Here th women wear two separate pieces—one for th upper part of the body and the other for th lower. The lower garment is worn around th waist and fixed in a knot in front. At times i is also twisted by a string on the waist in th form of a petticoat. The under-garment is made up of a piece of cloth about 2 yds long and 1 yd wide and is tied on the back. One end of the cloth is passed above the left shoulder while the other end is passed below the right hand, the two ends being more or less permanently fixed. The lower ends of the garment hang loosely by the side of the body. The adult and young of both sexes wear black cotton strings round their neck and specially, the females wear them in bunches flowing loosely from the upper arm and neck. In Pākuṛ sub-division not a single female was seen wearing the upper garment in the above fashion. Even in the northern part of Rājmahal sub-division about Shāhebgunge the above style of wearing is not in vogue. Here the women use short 'Kāchulis'. In Pākur the upper garment is first tucked up in front and then passed over the left shoulder and is fixed at the back. Very slight variations in the dress of males occur in different parts.

Coiffure.

The Mālers crop their hair in various fashions. These people shave or cut their hair with the help of barbers of the plains. The Sardārs often have long hair reaching up to the neck on the back and temporal portions but the hair in the centre of tho forehead are kept short. The dress of a Sārdar has apparently been influenced by the plains people. Some village headmen have got very long hair which they tie in a knot over the head.

Tatooing.

The distribution of this art is not uniform with these hillmen. Tne northern part of Rājmahal sub-division has not got any Māle, either male or female, with a tatoo mark. Coming to the south of the sub-division and the north of Pākuṛ we find a few tatoo marks on the face. These tatoo marks are often in the form of a star between the eyebrows, sometimes like an arrow upon the forehead, sometimes in the form of a dumb-bell-shaped figure with the two bells designed as stars. In other parts of Pākuṛ sub-division these forms of tatoo marks are also met with but in the Dohāri Hill (Hironpur) I found that met the development of this art had reached its climax. Writing of this Mr. Bainbridge * refers to some tatoo marks on the forehead only but he does not associate any particular locality with it.

Ornaments.

The Mālers and specially their womenfolk are very fond of ornaments.

Head :—The Pāhāṛiās use comb and hair-pin for tying the hair. These are usually made of bamboo sticks. These combs are largely ma by the Pāhāṛiās of Saklā, a village about 5 mil west of Surajberā, between Kunjbona and Litipār They always bear nice carvings and decoration Earrings are also largely used by both th sexes. The males only wear two ear-rings, on in each lobe of the ear but in the females th whole pinna is pierced into several holes to hol four to fifteen ear-rings in each. The femal always wear nose-rings on the left ala of th nose but among the Pāhāṛiās living about Shāhe gunge (Karambi, Choṭā Pachurki) the males to wear a nose-ring on the right ala. In Pāku and eastern Goḍḍā the nose-ring is replaced by small star-shaped ornament and a small ring worn by piercing the septum of the nose although a large silver nose-ring was met with in the nose of the mother of the village headman of Kunjbona.

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* Bainbridge, R. B.— *The Saoria Paharias of Rajmahal Hills—Mem. Asiatic Soc. of Bengal*, Vol. II, P. 59.

Neck:—Both the sexes use necklaces of glass beads purchased from the market. Another type of neck-ornament is a string of coins, the circular silver four-anna-coins being mounted with a ring on the border. Black threads are also worn in bunches from the neck. These threads usually carry flowers, and other articles of temporary adornment during social functions. Hāṅsli, a neck ornament of zinc is worn by the females only.

Upper Limbs:—The males usually wear on the arm and sometimes on the wrist a zinc or bell-metal bangle. The females wear on the forearm a large number of bell-metal bangles, which look like spirals. Circular pieces of shells permanently joined by molten lac, after they have been inserted in the hand, are also worn by the females on the forearm. Armlets and finger-rings of zinc are also worn by the females.

Lower Limbs :—The only ornament on the ankle is used by the females and children. The common variety is the solid circular bronze rings. A second type worn by adult women is an inverted shaped ornament, the loop of which is firmly fixed on the back side of the leg. This ornament is also largely used by the women of the plains and the relative absence of this type among the hill-women of the Rājmahal sub-division shows that this has been adopted from the plains. The children also wear another type of anklet, which is made up of two circular brass or bronze rings soldered in the middle line with some red seeds of the wild *kuṅch (Abrus precatorius) inside.*

Flowers and creepers :—These are usually worn during festive ocassions, market days and other social functions. On the market days when the youths of both saxes come to the market, the strings on the arms and necks, ear slits, slits of the pinna and hair carry various creepers and red flowers with wide corollas. Market is the proper place where mates are courted, with presents, which in particular can be had near at hand. Flowers are exchanged for gifts of necklaces and combs as such; flowers are presented to the intermediary who introduces a girl to a young man or *vice-versa*; flowers are abundantly used in the early stages of courtship of a young pair. The Santāls typically excel in this art than any of the neighbouring tribes.

Houses and Villages.

The Mālers build their huts usually on the hill slopes. A dozen huts often make a village. The conservative spirit of building houses on the hill slopos is met with throughout the whole of Rājmahal sub-division (excepting a few villages under Rāksi Bungalow) and the northern border of Pākuṛ. In Pākuṛ and eastern Goḍḍā over a small area are seen a few villages on the plains. The villages on the plains are from Liṭipāṛā to Kunjbonā (Surajbeṛā, Kunjbonā, Dumko). The houses are arranged in parallel rows from east to west, so that all doors may face either towards the north, or south. This is the custom throughout the length and bredth of Rājmahal, eastern parts of Goḍḍā and a part of northern Pākuṛ. But in the iuterior regions of Pākuṛ (Liṭipāṛā, Kunjbonā, Surajbeṛā, Dumko, Simlong) every house has thres doors to the norh, south and west. Here huts are not arranged in any particular plan.

In the construction of a Pāhāṛiā hut, wood is the principal material nsed. The thick posts of Sāl (shorea robusta), small branches of other trees and thatch grass for roofing are used. The Sāl posts are first arranged in parallel rows. Each row consists of four or five posts according to the desired length of the hut. The central row, consists of posts of higher length than the other two on the sides. The tops of all these posts have semicircular notches so that the cross-bars made up of weaker Sāl branches can be placed in a slanting way from the central post to the lateral ones. The tall central row of posts carry two cross-bars from the two lateral posts by its sides. The walls are made up of small branches of trees which are first longitudinally arranged and then fixed with strings with two or three crossbars placed horizontally. The walls are also covered at places with mud over the wood work. In Pākuṛ, the walls of some huts are made of thatch bamboo. The earthen floor is raised about 6″ from from the ground. For the roof, long thatch grass is bound to strings of wood for support. The door of a Pāhāṛiā hut is of two varieties. It may be fixed permanently at one end or it is kept loose so as to be separated when it is not required. The door in the latter case is made of the same material as the roof. A fixed door is made up of split bamboo tied with several horizontal bars of the same material. It consists of one wing only and is fixed with a bamboo post at the side of the door with strings made up of the barks of. trees. The door entrance is about 3 ft. high and 2½ ft. wide. A house has no window. All Pāhāṛiā houses consist of a single room about 15 ft. wide and 20 ft. long. One corner of the house is occupied by the fire-place where fire is all along kept to save the expense of the matches. Often it is made in a very crude form by raising three rough stones: at places these stones are seen covered with mud along with floor and a hole is dug for the fuels to be inserted. In such cases anot short line of stones are arranged along with fire-place, to keep the pitcher and other utens All houses have a small portico along with this is about one-fourth the area of the hou

Furniture and household utensils.

The furniture in a Pāhāṛiā house are few. T first thing that strikes the eye of an observ is the cot (*chārpois*), the bars of which are ma of wood and the strings are made of the sab grass. On the small portico are kept sm *charpois* about 1 foot broad, 1½ feet in length a 6 inches high, which are offered to persons vis ing the house. The next thing is the hea wooden mortar and pestle. This is hewn out a round log of wood some 2 ft. high and 1½ f in circumference towards the end. The circu ference is more widened towards the mouth t enable the pestle to work at different angles an also to allow a greater quantity of the materi to be hulled. The pestle is a long pole of woo about the height of the huller. The lower en of the pole is monnted with a circular iron rin In the very same way as the mortar and pestl these people make the '*mādols*'. This is als hewn out of a log of wood rounder and finer tha that for the mortar. In this case the whole o the inner surface is carved out into a hollow roun barrel. Finally, it is sent to the expert wh covers the two open ends with leather. Drinkin glasses made of bamboo shafts are used, thes are chosen from a stout end of bamboo about 8 inches high. The liquid is supported by the internode of the bamboo at the base. The cooking pot is usually of earth and is purchased from the local potters of the plains. To stir the boiling rice these people make a kind of wooden ladle. This is a flat piece of wood some 4 inches square having a long projecting handle behind, measuring about a foot in length. Ladles of dried earth are also made. This is made by dividing the long gourds longitudinally into two halves. These are also employed for drinking rice beer.

Food.

Of the harvest crops, maize is a delicacy to these hill people and they cultivate this crop to a greater extent than any other. This maize, they take both boiled and fried, and usually they do not sell it. In winter, these people gather all the field produce and store them up in a small granary made up of small bamboo fences raised about 3 ft. from the ground on a bamboo frame work. This maize rice is used by these people in all places and as maize is the only staple crop that grows in the hills the Mālers who mostly live there have been using it as their food since it was introduced among them. Dr. Buchanan * brought out this fact as early as 1823. After maize, *bajra* ranks the next. The hill people grow this in great abundance. This is also taken both fried and boiled. Of the animal food very few are excepted. Flesh of dead animals, is not disliked. Raw flesh is said to be a dainty. The animals these people usually prefer for food are cow, pig, goat and buffalo. Fowls and pigeons are highly prized among birds. The cow is not much prized for her milk. Buffaloes are costly and only the chiefs can afford to have them for purposes of cultivation. The Pāhaṛiās are very fond of fish which is taken either boiled or fried with powdered turmeric or chili purchased from the market. This improved method of cooking they have learnt from the people of the plains. Sometimes fish is dried for a certain length of time and then fried.

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* Buchanan—*Eastern India*, 1823, Vol. II. P. 125.

Drink.

Drinking water are usually supplied by the hill torrents. In summer months the water is scarce on the sloping hills and the Mālers are then put to great hardship. Of intoxicants, rice-bear and the palmyra palm toddy are taken. The former is taken in a great quantity during festivities. To prepare rice-beer these people use a kind of pills, which are made by the Santals out of native drugs. The palmyra palm toddy is prepared by these people themselves. Two methods of climbing trees are in vogue among these people. Those who are expert climbers climb trees simply with a circular strap, made of thin strips of palm leaves, fixed upon the two ankles of the feet. The other method is with the help of a long bamboo post tied firmly by the side of the palmyra palm tree. Usually two or three bamboos are joined together.

The small branches at the nodes of the bamboo serve the purpose of footholds. Both the sexes indulge in smoking tobacco to a great extent.

Occupation and Industry.

One of the chief occupations of the Mālers is to sell forest produce to the people of the plains such as fuel, bamboo, etc. Two other occupations are the cultivation of maize (*Zea Mays*) and *bajrā* (*Pennisetum typhoidum*). The *jhum* system of cultivation is sometimes adopted but it is not practised everywhere. Forest trees and shrubs are cut down and burnt also but owing to the small area of an individual holding the same plot is cultivated year after year. Sargujā (*Guizotia abyssinica*) is also cultivated to some extent by these people. This plant is cultivated on the comparatively flat surfaces of the hills.

Among industries the Pāhāṛiās rear silk-worms. This Pāhāṛiā industry is only limited to the rearing up the worms for cocoons which they place for sale on the market day. The silk worm larva is first reared up in a leaf where they themselves incubate and then the whole leaf is fixed upon a *kul* (Zizyphus Jujuba) tree the leaves of which they feed upon to grow. The egg passes to the stage of a cater-pillar when it feeds voraciously upon the leaves of the tree and becomes quiscent for some time under the shelter of a cocoon tr pass the pupa stage. The Pāhāṛiās collect these cocoons during this time without waiting for the insect to come out of the cocoon by boring its wall. When the worms are fixed upon the plants to be fed upon, a very careful watch is to be kept up to avoid the birds preying upon the insects. For this purpose the Pāhāṛiās build a very small hut scarcely affording room for a man to sit wherefrom they watch the insects. The rearing of the silk worm is abundant in the Rājmahal sub-division. The lac industry is mostly confirmed to Pākūṛ sub-division. In rearing these worms the *kul* (*Zyzyphus Jujuba*) trees also are used. The worms feed upon the leaves af the tree and lay a gum-like substance which is peeled off the stems of the tree for sale in the market.

Agriculture and Implements.

The Mālers are very rude agriculturists. In planting the maize the soil is turned up with a sickle or a scythe and the seed of the maize is insetted within. The mode of planting the *bājrā* is exactly the some. In planting *sargujā* there people employ both the bull and the cow to the yoke. Vegetables and fruit trees are also grown to some extent. The Pāhāṛiās spend much of their energy in the collection of the *sabai* grass. This grass is particularly restricted to the northern part of the Rājmahal Hills and the eastern portion of Goḍḍa. The Pāhāṛiās collect *sabai* from the hill slopes where it wild grous. This grass is imported by paper mill agents to an enormous quantity. The Pāhāṛiā's agricultural implements are very few. All people can not even afford to have a plough along with its eqnipments. The sickle and the scythe are the two verycommon implements. The axe is also used for cutting wood. In making these implements the mettalic part is obtained from the Santal smithy whereas the wooden portion is made by these people.

Fishing implements.

The Mālers have a few implements for catching fish. The fishing line is not much used. In Pakūṛ sub-division, apart from the fishing lines I have seen two types of fish traps. These traps are usually fixed on narrow channels along which water flows very rapidly. Of the two types, one variety is from the Dohāri Hill (Hiranpore). This trap is made of very thin bamboo-splinters tied in parallel lines. First, two separate pieces about 8″ square are made and then these two are tied together at one end in the shape of the teeth arrangement, so that it takes the form of the letter x. The trap is set with one of the long arms at its base while the other arm projects out of it in the form of an acute angle. The fish being carried by the rapid flow of the current are jammed at the angle. The other variety is also made of thin bamboo strips tied in the shape of a cone. The conical end is usually tied by a thread to take out the fish, while the mouth of the trap is furnished with a door with teeth arrangement. A fish while making its headway along the current can open the trap door and get into it but can not come out of it. No poisonous plants are used for the purpose of fishing.

Hunting.

The only hunting weapon is the bow and t arrow. The bow is of their own manufacture. It i usually made of a bamboo shaft and the string i made from the barks of trees. The iro arrowheads are bought from the Santal smith and it is shafted by these Pāhāṛiās themselve The shaft, at its base, has got a rectangula indentation thus forming two raised edges f support between the two fingers. The rectangular indentation is firmly fixed on the string o the bow. With this bow these people defen themselves from leoperds, tigers, and bears. A single spear was also met with in the village o Bendārkola (Rājmahal). The spear head is abou 7″—8″ long and 1½″—2″ wide, mounted on a long bamboo shaft.

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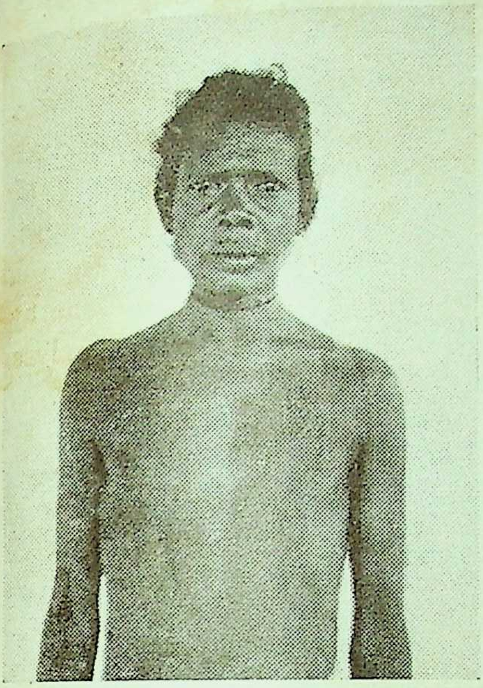
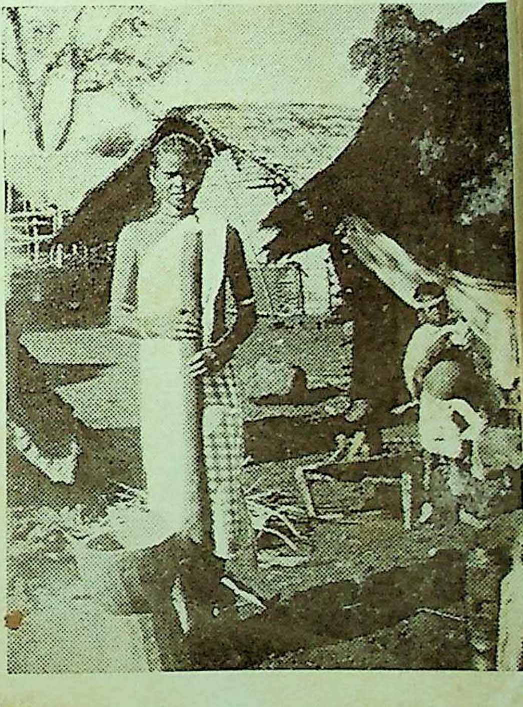


(1) Māle male from Kunjbonā.



(2) Māle female from Dohāri Hill.

V. HABITATIONS OF THE MAITAIS.

By S. J. Singh, B. A.

The Maitai habitations are rather remarkable for their shape and construction, as they are definitely in contrast to the prevalent pattern of pile-dwellings in the area. Ever since the time of Ratzel, it has been pointed out that a number of the East Himalayan races have huts standing on piles or gratings. Peal (*J. A. I.* Vol, xxii page-250) had drawn attention to the fact of the raised floor seen on the borders of Tibet in the north to the Solomon Island in the south. In contrast to it is the tradition of the Manipuris of having got the art of building houses from Pong (Burma, Shan States). Rectangular habitations stand out in sharp contrast to the pile-dwellings of the Indonessian type as one of the regular type of houses described in the Rig Veda and the present type over major part of India as also of the Caucasic Polynesian tract. It is also curiously found in the Madagascar regions and forest areas of Africa as also near the civilised old cultural centres in Central America. The importance of the Manipuri habitations is that we have still the fully preserved customs and canons about the rites connected with its various parts. It is possible that Manipur received very early, possibly from ancient Hindu culture, its rectangular habitations and became the seccondary centre of distribution of this type of hut to the surrounding Nagas and Kukis.

To a visitor the habitations of the Maitai seem to be of the same type as the Naga and Kuki houses in the valley of Manipur and southern Naga Hills, the only difference being that the Naga villages are surrounded by a moat. The houses are built on a mud plinth one and a half feet to five feet high from the lever of the ground and not on pile-topped platforms. It is a big hall with a portico facing east, the elaborate arrangements for different sections of which the centre is the fire-place, where a fire is always kept. Different places are assigned rigidly to different members of the family and different places and posts have different names, some having a magico-religious significance. The house on the whole is *Laikhamtaba* in form which means 'hiding its face from the sun'. The hall has no windows though now-a-days they are being introduced. Light is admitted though the front door and back door on the north-eastern corner. It has for ventilation a triangular cut called *Sanangkha* above the front door knit with a net-work of bamboos.

Just in front of the house is a rectangular courtyard which varies in size according to the land. It is cleared and in about the centre it is compulsory to plant a *Tulsi* tree, said to be the emblemn of Radha Rani. The *Tulsi* tree sometimes accompanies a Banian plant which when matured is removed to some other place in the area.

Col. McCulloch says that the Naga and Maitai hoses were of the same type. "The *Yum Chau* of a Maitai chief is, though he does not reside in it, still kept up, and is made in a Naga fashion." In circa 14 F. 4 A. D. the king of the Shan Kingdom of Pong demanded the daughter of the Maitai chief. A feud arose between the chief of Khambat and in A. D. 1475 King Kingkhomba accompanied his brother-in-law Keeyamba the Maitai chief to Manipur after annexing Khambat and "as his ancestor Samlong had caused alterations in the manner of dressing, he caused a change in style of the building of the houses. The Munnipore chief's Nagā house appears to have been abondoned as a residence and his present one the *Sunkaie Poon Seaba* or long lived house to have been made." [1] Dalton affirms this statement and finds similarities between these houses and those of the Shans. [2]

The stories and traditions prevalent in the valley of Manipur ascribe the introduction of house-building to a mythical king Khoi Nigon. His type was later on improved upon by King Khagemba towards the early part of the 17th century, in consultation wiih his five Gurus. This mythical story may be the reminiscent of the wave of the ancient Hindu (Rig Vedic) culture which might have come through the north-eastern passes.

Col. McCulloch says that "the dwelling houses of the Manniporees are all of the same form but those of the rich are larger and constructed of better materials than those of the poor i. e. the beams of the former are of wood whilst those of the latter are of bamboo. The walls of both are of reed plastered with a mixture of earth and cowdung and the roof is thatched with grass. All the dwelling houses face to the eastward in which direction they have a large open veranda. In this veranda the family sits during the day and in it all the work of the house-hold is carried on, except cooking which is performed inside; on the south side of the veranda is the seat of honour. Here a mat or cloth is laid for the head of the family, upon which no one intrudes. The inside of the house is without partition. But it is divided into four parts or *Ka*-s in the houses of rich people. The Maitais may make houses of seven or nine *Ka*-s including the portico-veranda according to their taste but such houses are never built perhaps for economical reasons as throughout the structure of the whole building not a single nail is to be used and it is built on joints in bamboo or wood as the case may be. It is a general rule to make the house face east-ward in order to get the morning sun on the veranda. The Maharaja's house faces the south. It is said that the house of the *Angom Ningthou*, the head of the most important clans of the Maitais, was on the south of the *Ningthouja's* house, and the Maitai King frightened of the *Angom Ningthou* faced his house towards the south in order to watch him The whole of the history of Manipur abounds in many instances of the treasonable pratices of the *Angom Ningthou* where he is the head and centre of rebellion and disaffection.

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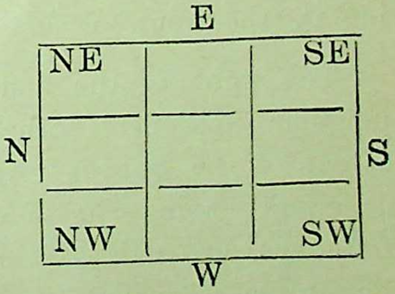
[1] Account of the Valley of Mannipore.
[2] *Shans.*

The Maitais have very strict rules as regards building their houses. They take great care and anxiety in going on with the building operations. Mr. Hudson in "The Meitheis" refers to a passage from the chronicles of Manipur "which describes the trouble which happened when something was done which ought not to have been done in course of the erection of the *Kangla* or Royal Enclosure of the Coronation Hall.". "On the 15th of *Mera, sak* 1771 i. e. in October 1849 Lairal Lakpa the astrologer declared that the place selected by the Pandit for the site of the main post of the *Kangla* was wrong because it would interfere with the place of the snake *Ananta*. The pandit had his way and a hole was dug with the result that blood issued, and a bone and a stone were found there. Some days later a post was erected, but that night a white rainbow was seen over the post. The next day a snake entered into the hole where the post was and there was a frog on the back of a snake. Weeks later the king's elephant went mad and on the 5th of *Hingoi* (November) a fisherman at *Wabgai* caught in a trap a fish which he put in his bag. He was surprised to hear the fish say to him 'You want to eat me. I am the *lai* of the river.' The fisherman replied that he had caught him in ignorance of his real rank. The fish then said 'Go and tell the Maharaja to do warship on behalf of all the people', and jumped back into the water. A swarm of bees was seen at the gate of the Pāt, and Lairel Kakpa declared that all the ',bad signs of the *Kangla* had appeared", and then a trial was made of the value of books of the Pandit and the astrologer Lairel Lakpa. The test was which book correctly gave the depth at which *Movang Ngomoa* Maharaja, the stone of the tortoise or snake *Pakhangoa* was found. The book of the Pandit proved trustworthy, and then the ill omens ceased to appear. Indeed according to the chronicles hardly any event of real importance ever occurred without some previous presage".

The Maitai houses are built on the basis ofhuman body and as such it is not regarded as good for laymen to learn the method of its construction and it is tabu to teach this to non-carpenters. The *Yanglel*, the topmost ridge pole stretching east to west for the sloping, is identified as "Susumna"! The two *Khngbu*-s or ridges in the middle of the slope are "*Irā*" and *Pingalā* respectively; and the bars at the end of the slope are its two sides. The southern bar is by an inch or two smaller than its corresponding bar on the north. If they are equal the house becomes a *uchek changba yum*, a house for the birds to live in, which is a sign of bad luck for the house-holder.

The general architecture is that two rows of posts are placed in the house just at a distance of one-fourth the breadth of the whole house, from the two walls on the south and north. These rows of posts are posted in such a way that they divide the house into imaginary Kassor compartments. It is very curious that the distance of these posts from the wall on the south is never equal to that on the north, the latter being less than the former by at least two inches. This northern part between the wall and the row is regarded as *Ashithong* or the way whence a dying person is to be removed. Any person suffering from ailment is to lie down near the bed of the head of the family where the *maiba* or the priest-doctor will come to treat him; when the patient begins to sink he is brought out through this passage from the front door and through the post of the veranda on the northern row and the north wall. The two posts of the verauda are called *Mangol Ukhoktel* (Mangol Veranda) *Awang* (north) and *Mangcl Ukhoktsl Makha* (south). These two Ukhoktels are regarded as the two nostrils, while the gable which is seen from the front is its nose.

The compound is divided into nine parts in such a way that the length is divided into three equal parts so also the breadth. Special names are given to these nine rectangular plots. The north-eastern portion is called *Firan*(1) *Yumpham.* That on the north-west corner is called *Lamhui Yumpham* ; that on the middle north is *Noagsha Yumpham* ; the south east is *Maikhu Yumpham* ; the south west corner is *Tanba Yumpham*; the



South central portion is *Samu Yumpham*; the east centre is called *Ningihoukaba*; the middle is called *Sangai Yumpham*; the west-central is *Laipakpokpa* or *rahu.* (*Yumpham* means place for residing).

The middle rectangle of the plot is a place reserved for the house of a king or *Lai* (deity) as it appears from its name *Sangai*, meaning 'palace'. In the middle point of this i. e. the point where the diagonals of the plot bisect, there resides a goddess. It is known as *Lai Angoubi* (white goddess). On an evening selected by the soothsayer the owner of the land comes to worship with the offering of *Hairuk* (fruits generally) betel-nut and sweets made of fried and parched rice with the following formula;— "*He Ibema Angoubi Sana Lupagi Mapu oiribi ngaonda khurumjari* (I bow down to thee O White Goddess, mistress of gold and silver); from this thy place let all black, green, gray and red and deformed *lais* (spirits) disappear" Certain other incantations are also uttered. This middle point is marked and it does never fall in the middle of the portico. Generally it lies just below the plinth in the drain surrounding it, the front.

The sight of the house in the aforesaid retangular divisions is near about the south-western corner of the *Sangai Vampham* forming a Parallelogram having its sides in the *Samu Sangai Laipakpokpa* and *Tanba Yumphama* generally. The place is some-times shifted at the instance of the Panji (Astrologer) in cases of persons with moon at Singha (Leo) and Dhanurasi (Sagittarius) at the time of birth, to the north-western corner of the *Sangai Yumpham* comprising of land from *Nongasa*, *Sangai Laipakpokpa* and *Lamhui Yumpham-s.* The Panji then goes into the details and casts for his client three charts viz. *Graha Yumsarol*, *Nakshatra Ynmsarol* and *Nagatara Yumsarol*, one after another, to see whether his *graha* (star) and proposal co-operate. If three of the charts yield good result, it is the best time for the owner to begin. He can proceed if at least two of the charts permit him. The good *grahas* (planets) are Sōm (moon), Budh (Mercury), Brihaspati (Jupiter), Sukra (Venus), and the bad ones are Rabi (Sun), Mangal (Mars), Sani (Saturn), Rahu and Ketu. Next the Panji is asked what would follow if the Jatra (first post) is in the place selected for it. He throws seven *cowries* or asks the proposer to point on a chart as the case is and consults its results. The chart is divided into nine parts with numbers and alphabets accompanying each of the numbers; *Sa* goes with one; *Tā* with two; *Tā* is associated with three and so on up to nine accompanying *A*. The solutions are of this kind; for example, say for "2 Ta" the solution is :— "Once a thu-nder-bolt fell on the Agni *kon* of the site you propose, A Samu (elephant) is there with it; in the Vāyu *kon* there is some animal like a cat and fox. The west is the rendezvous of *lais* and there is a filled-up ditch. Sometimes you will suffer from itches, as there is a *Uthum* and *Tairel* in one root, on it rests a black ghost. The place is on the whole good for residence".

The lucky day for posting the Jātrā is then ascertained by the astrologer. On that day at the time fixed the Jātrā wrapped in a cloth on the top, is to be planted; thus ends the episode of the astrologer, the Panji.

The house is supposed to be inhabited by some gods and goddesses, and respective places are rigidly attached to each of them. There is *Mahadeva* with the Jātrā, *Nārāyana* with the *Jātrā-paba*, (this Nārāyana is perhaps Vishnu represented as the curer of all diseases). The hearth of the *chakhum* (kitchen) is the seat assigned to *Bhāṇḍāri* (Ningthou-kaba) and the southern post with the wall is assigned to *Laipak-pokpa* or Rāhu. A ghost or rather a spirit has somehow made its abode in the last of the *Chakhumka* the last of the *kas* from the front. He is black and is thus called *Amuba*—meaning black. The goddess of the Phunga or the hearth in the centre of the house is called *Imoinu Ahong-chaobi.* She is the first of the seven wives of *Kubera* who is believed to be the cashier of *Mahādeva* the God of Wealth. She seems to represent the Goddess of Wealth in the house. Her place is just on the west of the hearth Phunga in a pot placed upside down with a hole in it. The housewife when she returns in the evening with her purchases first lays them down near it and counts it as if she is submitting her day's account. The goddess is worshipped at least twice a year with *ghee*, rice, *til* (sesame). flowers and *dhup* with the following *mantra* :— "*Harasa saraha rasaha ho hing lune tongne karte chaphu saobagum saugallo*".

The important house-hold deities, one a male and the other a female, are Sanamahi and Laimarel. Sanamahi's place is on the south-western corner of the house and it represents the god of the family as well as of the house. Sanamahi was the elder son of Guru Shidaba, Pakhangba being the younger. One day the Guru asked both of his sons to make a tour round the earth and the one who wins the race will rule the earth. Snamshi started his round, when Pakhangba was told by his mother that to go round the Guru's seat was equivalent to going round the earth, which he did and became the King of Manipur. This story is reminiscent of the story of the two sons of goddess Durga, Kartikeya and Ganesa who were told to go round the world and the latter circled round his mother and was commended. To Sanamahi, the Guru gave the mastery of every house on his completing the tour. Sanamahi is represented by an old bell-metal coin on a shelf. The coin is kept in a basket *(Lupak)* on a small shelf made of *Utong* (bamboo) consecrated by a *Maiba* (priest doctor) or Maibi (female). *Sana-Mahi* is worshipped *(iratpa)* by the head of the house and family at least once a year at the new year *(Chai raoba)* with the offering of broad *(Tal)* fish *(ngamu—*

ophio cephalus harcourtbut-leri) rice flour (*vam*) made into a paste, fruits—generally plaintain, parched rice, sweets (*kabok*), *Athumhao* and various flowers namely *Langtheri*, *Leiri*, *kusumlei*, *kombirei* (iris) etc. Any food may be offered to the god and it is also worshipped before cultivation, after harvest and in times of illness. Sanamahi seems to represent the Sun-god as it appears from the *stotra* or incantation uttered at the time of its worship and the basket in which it is placed, we mean the coin (*sel*) is placed, perhaps represents the earth—the abode of the sun at night in the western horizon. The bell-metal coin (*sel*) may have some connection with the gold coin of Lakshmi, goddess of fortune in the Hindu house of Bengal.

The goddess called Laimarel is represented by an earthen-ware pot of water against the north wall inside the back door. The water is never filled to the brim. These two, the god and the goddess, are kept by the head of the family and are handed down to the eldest son, at his death. Their worship has fallen into disuse now-a-days. When the family cannot maintain them, they are handed over to the Brāhmin known as Laisangrakpa.

In cases of plots which are long on the south and smaller on the north the proper site for the house is by the southern line as the northern portion of such a plot is said to be inhabited by some *Lai* where it is to be worshipped in a small temple. Such a plot is called *Firal-Yumpham*. The proper site for a house in a plot which is wider on the north but shorter on the south, is near the northern line and the proper site for the Jātrā or the first post and plinth area will be ascertained in both cases from the *Yumsarol Oja* or a master of the astrological references about the house.

There is no restriction as to the materials used by the Manipuris in the building except with regard to the first post in which case it is very important to select the proper wood for it. In the selection, the first word of the name of the man whose house is to be built, is taken into account. The first letter should correspond to the first letter of the name of the wood; thus, for example, Tomba is the name of the man who has thought of building his house; for him the best log would be "*Tairel*" for Urarbi it is "*Uu-in*", for Chourjit it is "*Cha-hui*". When he cannot find a log corresponding to his name he tries with the middle letter on failing which he consults his Rāsi or star to find a wood out as above. If he cannot find a log from any of the criteria, there is always "tairel" the ugi ningthou or the king of logs at his rescue, the best wood for all.

When the house is built it is lucky for a Pangan (Manipuri Mussalman) to lay the first clod of each for the plinth though now-a-days this rule is not strictly observed. The reason for this is supposed by some to be that the Mahomedans were the rulers of India. It may also be due to a traditional story that once an astrologer was called by the king of Manipur to find out the time for pegging the first post of his house. He told that the best time was "Numit chumthang khamba" when the post would produce a lotus of gold, a very fortunate omen. The post was planted at the stipulated time but alas! the lotus was not there. On a thorough search it was found on the first post of a house of a Mussalman who has also planted it at the same time. The plinth is to begin on any Monday—a lucky day, and should be finished on any Friday. There are no house horns in any of the houses of the Manipuris except on the *Uttra* building in the Kangla. These horns are said to be horns of *Taoroinai.*, the serpant steed of Pakhangoa. The house horns are, it is said, reserved for the houses of Lais and the king. Curiously enough, it is regarded unlucky to have bamboo cross pieces equal in number on both sides and to have the cross pieces a cross the posts.

The whole house is divided into two imaginary halves—the northern half and the southern half. The northern half is set apart for women and is called *Mangsok* derived from *Mang*--meaning—to pollute, and *sok* meaning,—to touch. Women guests take their seat on this part of the veranda. The southern part called *Phamen* is set apart for men. On the veranda near the wall is the seat of honour, described by Col. McCullach, called *Mangon Phamen* (*mangon* veranda; *phamen*—from *pham*, meaning honour). The whole of the portico is smeared with a plaster of mud and cow-dung to ensure purity. The room reserved for the head of the family is called *Laplen-ka* close to the wall on the south side about the middle. It is called *Laplen-ka* as it is usually screened by a mat, having of course no ceiling, along the line of the posts. This *Ka* is always the biggest *Ka* in the house and in its centre is the fire-place, the *Phunga* and the *Phuaga-lairu*, the seat of *Ihoinu Ahongchaobi* described before. With the north wall is placed the *Laimearal*, the mother of Sanamahi. The eastern extremity of the *Ka* from the Jātrā to the south wall is called the *Lukhum* of head where a chest about 2 feet high. 4 to 5 feet by 2 to 2 feet—an old wooden box to keep the family belongings. The box is locked which, in the words of Hodson, "the thieves of Manipur laugh". On its top, baskets called *Phiruk* are placed for keeping the less valuable belongings of the family. The head of the family has his bed described by Hodson as "a large wooden structure with four posts which form a conspicuous feature in wedding processions". is placed along the north. It is wall. A mosquito curtain is hung from the ceiling on the bed and no one should sleep on it except he. The portion from his bed to the mat-partition along the pillars is called *Phamang* where the mistress of the house takes her rest on a low bed and the persons suffering from ailments lie beside her. Beyond the *Laplen-ka* on the east is *Lukhum-ka* derived from *Lukhum*,—meaning at the head (of *Laplen-ka*). This *Ka* is sometimes called the *Pibaka* because it is the seat of the eldest son of the family called *Piba*, as long he is a bachelor. When married, he lives in a separate house of his own. The daughters of the the house sleep on the northern half opposite to the bed of the son and also opposite to that of *Laplen-ka*. It is thus called *Ningon* (daughters) *ka*. This room has for its entrance door the main door or the biggest door in the house, opening inside, called *Mamang thong* or front door. This door is never in the middle of the *Fakton* or the wall on which it stands; it is slightly inclined towards the *Mangsok* on the north.

The last or the fourth room is the *Chakhum-ka* or the *Ka* for the kitchen, west of *Laplen-ka*. It has a small door on the north wall called *Maning* (back) *thong* (door). The hearth for cooking is some-where near the north-east corner and the south western corner is the place assigned to *Sanamahi*. The two posts marking the area of *Chakhum-ka* are called *Umbirel* or large posts They are slightly larger than the other posts; as such the house seems to be on an inclined plane—slightly inclined towards the front. The northern *Umbirel* is the seat of the spirit, black in colour and called *Amuba*. The servants of the house take their food near this post; hence it is also sometimes called *Manai* (servant) *Chakchapham* (dining place). My informant told me that if a thief somehow touches this post after breaking in, he forms an alliance with the spirit and the whole family is dead asleep till he finishes. It is forbidden to block the line from *Sanamahi* to

Laimeral and the Maitais take special care to observe this rule. Under the southern post an earthen pot named *Chengphu* is kept. The house-wife puts the husked rice in this *chengphu* (earthen pot) every day and takes out what is necessary for daily consumption leaving some so that it is never kept empty. Some of my informants called it *Lakshmi* the goddess of fortune.

The head of the house dines with his face to the east and his seat is reserved in the middle of this *Ka* a little towards the wall; his wife serves from just opposite his side. His guests sit in his front, facing west. The eldest son of the house sits towards the right of the head of the family and the younger ones may either face east or north. The house-wife takes her food when every other member has finished; she sits down facing east the place where she was serving. This rule is of course not srictly followed except in the case of the house-holder. But at the same time it is forbidden to every member of the family to take food facing west or south.

Of the two rows of posts the most important is the first post called the Jatra, the one at the head of the *Laplen-ka.* It is to be posted on a lucky day ascertained from the astrologer and its pegging signifies that the foundation proper is laid. The post is wrapped towards the top with a band of cloth generally white over which are tied three mangoe leaves and a wreath of flower. It is then washed by a Brahmin with

Tulsi leaves and, when the stipulated time comes the house-holder closes his eyes and examines his nostrils waiting for the breath to issue through the right nostril. The Jatra post i lifted with shouts of *Jaya Mahādeva, Mahā-deva, Mahādeva.* The Jatra and its hole i believed to be the *linga* of the Hindus, made o gold and the hole is the red lotus with 108 leaves Before the Jatra is posted, a little hole is drilled in such a way that it is located in the plinth where little quantity of gold and silver is put with certain incantations. It is then closed with a piece of wooden or bamboo peg. An offering o milk, *ghee*, sugarcane, turmeric and *hairuk* (fru offerings) are buried as offerings to the Bas Debotta (Bastu devata) made by a Brahmin A *sidhā* (offering) of rice and eatables but not fish are given, a *ghaṭ*, (a small earthen jug is also placed near it. Certain rules are observed for the lifting and they vary according to the seasons and months of the year. Thus in the months of *Hiyangai* (November), *Poinu* (*Pauṣ*) and *Wakching* (*Māgh*) the Jatra points towards the south, first push should be towards Mairam (*Agni kōn*). The owner of the house is to see the Jatra with a sound of *pcha pcha*, and with folded hands he salutes it in right Hindu manner.

The post just to the opposite of the Jatra in its line is called *Jatra paba.* It is the seat of the god of cure named Baidya Nārāyan. The Maitais call it *Maipham* from *maiba* or priest doctor and *pham* meaning, seat. *Maiba* perhaps owes its origin from the sanskrit "*amibha*" meaning destroyer of diseases. Whenever there is any ailment in the house, the *maiba* takes his seat near it on the west before he attends his patient in the *Laplen-ka.* The four corner posts are called "*sum*". The house is measured with a rod equal to the out-streched hands of the owner of the house. This would be about six feet standared measurement. It is called *Lam.* The house generally is three *lams* and a *khubom* (a *khubom* is about six inches) or a *khubom* less than three *lams* wide while the length is a *khubom* less than eight *lams* in the former case and a *tangshibi* (about 5 feet) less than eight *lams* in the latter. The length may be added to by a *lam* but never a fraction, and as such this measurement is not always stritly adhered to. The beam connecting the *Ukhoktel* or the two posts of the rows in the *Mangol* or the portico, and the posts on the *fakton* or the front wall is called *suptu* which is two *lams* and one *khubom* or two *lams* and half of a *khubom*, as the case may be. The vertical bar rising on the *suptu* holding the ceiling near the *fakton* is *sanayumbi khongsangbi* which is one-fourth the distance between the *Ukhoktel* and the post on the *fakton* or one-third of the distance between two posts. Just near the *sanayumbi* there is a vertical bar called *sanayumbi khongnembi* of half the length of the *sanavumbi khongsangbi.* Thesemeasurements are for a house with four *kas.*

The *Mangol* or the portico on the front of the house proper is about two to three feet less than three *lams* and the court-yard varies from seven *lams* to nine *lams*. It is never six *lams*. About four *lams* from the *mangol* the sacred Tulsi tree is planted. The *Laplen-ka* is the biggest of the *kas*; the next in size is the *Chakhum-ka*; the smallest is the *Lukhum-ka*. The plastered reed wall stands on bamboo posts smaller in diameter than the posts in the row. They are arranged in equal distances from one another except in the case of the one opposite to the back door which is never to fall in the middle of it otherwise the house becomes the abode of snakes. These posts are called Loi *umbis*. They are three in the *mangol*, two in the *Lukhum-ka*, four in the *Laplen-ka*, and three in the *Chakhum-ka*. But on the north wall of *Chakhum-ka* there are two *loi umbis* only, while in the other rooms they are equal in number on both sides. The posts (wall plates) making the rooms on the walls are called *Lairaks*. They are thus six in number on the two side walls. The two rows of posts begin from the *ukhoktel* ending on the back wall on which there are four more *loi umbis* besides these. The twenty-five *loi-umbis* are counted as "*chung, shi*", "*chung, shi*" and so on ending in *chung* and thus the number is odd. All the *umbis* supporting the wall are thirty six in number as we have seen. A Manipuri (Maitai) Oja told me that their text-books house-building speak of only thirty regarding two *umbis*, but the common practice is to make them thirty-six; the reason nobody could tell me except that it is to ensure the stability of the house.

The Jatra post should be two *lams* and one and a half cubit on the ground when the width of the house is 3 *lams* and one *khubom.* It should be only two *lams* and one *khubom* when the width is one *khubom* less than three *lams.* The beams which connect the *suptu* with the *loi-umbis* are called *masha* and are two in number on each side of the *mangol.* These *loiumbis* and *loiruks* are shorter than the *umbirels* by one fourth of the whole width. The roof is a gable on the *umbirels.* Thence it slopes down thə front on the two *ukhoktels* and the two corner *sums* and on the back on the 6 posts. The slope on the front is called *mamang laikhal* and that on the back is *maning laikhal* The whole roof stands on cross pieces generally made of *humdangs* (a kind of bamboo) two tied together. They are six in the *mangol,* four in the *lukhum-ka,* six in the *laplen-ka,* five in the *chakhum-ka,* eight on each of the *laikhals,* namely *mamang* and *maning.* The cross pieces never cross the posts except in the *laplen-ka* where one on each side rests on the posts. It is customary not to put any cross piece which falls in the line of the centre of the front door. Another important thing in the house is the position of the *karalls;* they are three in number. The *Usoi karal* or *chem* in the *chakhum* falls on the line of the two posts marking it, slightly inclined towards the south. The *taereinai karal* is in the *mangol* and *karal achouba* or *Mahadeva Karal* in the *laplen-ka.* The two diagonals of the house are never equal, one is bigger by an inch or two—the one from the south-western corner is the place of Sanamahi;

it shortens the lives of the inmates of the house and the house cannot 'breathe', it is said. One of my informants told me of some connection of the North Star with the house. The *Chup* or the North Star when it falls in the same line of the first cross-beam connecting the four front posts, makes the house *laiyum*—not a fit place for men to live in and the inmates are bound to die inside the house,

A fact of much importance is the *Sagun thong* or thief's door. This is regarded as taboo even to the Manipuri carpenters. I got many different versions regarding it from different men. One of them told me that the total length of the sides of the house should be divisible by a *lam* or just five to eight inches less than that. If it is a fraction more than that it will call the thief in. In another place the *Oja* asked me to measure from back leave where the indivisible *lam* is in the *lukhum*-ka, and then measure from the front to the same place with n indivisible *lam*. These two measurements shall not meet or if the distance between these two measurements is for an average house-breaker to come in, it becomes a *Sagun thong*. It is further believed that there is a *lai* or shadow of Sanamahi at the *sum* or the corner post on the south. A thief first stands in the courtyard whistles for Sanmahi's permission, and when Sanamahi answers him he goes to the *sum*, touches it and the whole house fall fast asleep. (From a Oja at Thaobal, Imphal).

When the house is complete the astrologer comes again with his almanac to ascertain the proper moment for entering the house. This first house-entering is called *Sankaba.* It is accompanied by a ceremony and a feast to the builders. The Master of the house brings fire, water of *chighi* (water of washed rice) in a *chaphu* or earthen pot, pure water, paddy and broomstick at the stipulated time. He will enter with the fire in his hand followed by his wife with the earthen pot on her head; then the paddy and, last of all, the broomstick. The fire is consecrated with an offering of rice *ghee Dhūp* etc. before it is taken in. It is then placed in the *chakhum* or hearth for the time being. In the evening the *lais* appertaining to the various places are to be worshiped with *hairuk* or fruit offering, parched rice (*kabok*) flowers etc. by a *maiba* or priest doctor, one after another. The *dakhina* or the pice offerings on each place are later on collected and tied in a cloth by the house-holder to be kept in the big chest. These pices are utilised on a *Trinath* (Mahādeva) *khurumba* (worship) day for ensuring wealth and prosperity to the house. The pices are sometimes kept in a *chapuu* (earthen pot) of medium size together with a small quantity of gold and a queen-marked rupee which is buried near the Jatra where money is also sometimes buried.

A woman during her menstural period is not allowed to touch or approach the *Jatra*, the *phungalairu*, the *Laimeral* or the *chengphu.* It is after washing and cleaning herself on the sixth day that she she is allowed to enter the *chakkhum.* She is absolutely debarred from touching these during her pollution period. During her confinement she is removed to the *lukhum-ka* where she remains for twelve days. The whole family is regarded unclean during such period after which a Brahmin comes to purify the house by sprinkling sacred water with a Tulsi branch. Death also defiles the house till the Srādha day which is generally the thirteenth day or thirty-first day after death. The dying man is taken out under the Tulsi tree to die in no case must he die in the house. Should a death occure inside a house, the house has to be deserted at once, demolished and a new residence has to be built in its place.

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MISCELLANEOUS CONTRIBUTIONS.

I. CASTE AND RACE IN INDIA
REVIEW OF A REVIEW.

In a review of my book on *'Caste and Race in India'* that appeared in *"Man"* (November, 1932) the reviewer writes: "Dr. Ghurye holds that caste in India is a Brahmanic child of the Indo-Aryan culture, cradled in the land of the Ganges and thence transferred to the other parts of India by the Brahmin-prospector and that endogamy...... the out-standing feature of the system......was first developed by the Brahmans in the plains of Northern India and thence conveyed as a cultural trait to the other areas. We feel that this explanation is inadequate, and that account must be taken of such phenomena as the totemistic septs, the *devakas* of Western India, and many other factors of race, tribe, kinship, locality, religious and social usages and function that have contributed to the building up of this complicated structure, the foundations of which go down to times anterior to the so-called 'Aryan' immigration, the influence of which there has been a tendency to overrate. Again if we regard the system as an 'Aryan' importation, we are confronted with the fact that it developed most rigidly in certain respects in Magadha and Southern India, Etc".

To the readers of my book it must be clear that the explanation of the origin of caste, quoted by the reviewer in "Man", is not the whole explanation. In the first chapter of my book I have analysed the various elements that make up the caste system. Endogamy is only one of them. The passages quoted by the reviewer explain the origin of endogamy alone and not of the whole system of caste for which I have suggested almost all the factors which the reviewer opines should have to be considered. In chapter 2, while analysing the nature of caste-groups, all these items, excepting totemistic septs, *devakas*, and kinship, have been utilized to explain the origin of the multifarious groups. I begin the chapter thus: "We have seen that in the Hindu caste-society there are a number of groups with distinct names. The nature of these names is likely to furnish us with a clue to some understanding of the process by which distinction between groups came to be formulated". (p. 28) Further on page 79, I observe: "It seems reasonable to conclude that endogamy was being sought to be rigorously prescribed and was followed to a large extent, and that the writers were at great pains to explain the origin of so many different castes, which had sprung up either by miscegenation local segregation, occupational specialization or tribal incorporation, because the orthodox theory mentioned only four castes. I have purposely omitted the so-called totemistic septs, *devakas* and kinship because it is my considered opinion that the first two factors, which have intimate connection with exogamy and the second perhaps also with totemism, have not influenced the formation of the castes-system, while the last factor, viz. kinship, may have a very elusive connection with caste, the precise nature of which I have been unable to discover. If the reviewer in 'Man' will present a connected account of his views establishing the influence of totemistic septs, *devakas* and kinship on the formation of the caste system I think not only I and other students of the institution of caste but also students of totemism and kinship will feel highly indebted to him.

While explaining the origins of development of the other elements of the caste system I observe: "The restrictions on intermarriage and on food were thus in their origin the outcome of the desire of the Brahmins to keep themselves pure". (p. 146) The evidence for this view is led in chapters 3, 4 & 5. I have tried to establish in chapter 6 that occupational rigidity and civil privileges and disabilities of the various classes in society was a widespread feature of ancient society. In the chapter on origins I remark: "We have noticed it as a widespread feature of ancient and mediæval society that the occupation of each group tends to become customarily hereditary among its members. Only the Brahmins reserved as their monopoly the occupation of a priest. No doubt they were in the beginning inspired by the laudable motive of preserving the all-important sacred lore. But later on equally clearly they looked upon their priest-craft as their monopolistic activity and rigorously kept it up, while the traditional occupations of the other two castes were progressively encroached upon by other castes, There is also a natural inclination for each occupational group as we have already noticed, to be habitually endogamons. Both these tendencies become rules: the former more or less lax and the latter very rigid, after the pattern of the Brahmins. Occupations thus became endogamons groups. (pp. 146-47).

As regards the charge of overstating the influence of the 'Aryan' immigration and of not evaluating the contribution of times "anterior to Aryan immigration', I should like to point out that I have clearly set out the limitation of our available data on the subject and proposed the theory of origins only under certain conditions. I observe: "Of the many cultures that flourished in India the literary records of the Indo-Aryan culture are not only the earliest but contain the first mention and a continuous history of the factors that make up caste. The only other culture whose records are intelligible is the Dravidian; but when that culture put forward its documents that are extant, it had already been immensely influenced by the Indo-Aryan tradition". (pp. 142). Under the circumstances it would be a very instructive to know what other source of knowledge of the social conditions of times anterior to Aryan immigration; are available.

In the last part of the long quotation I made above from the review in "Man", it appears to have been suggested that I have not given consideration to the fact that in some parts of India certain elements of caste operate more rigidly than in others. Here is what I save haid about Southern India: "The Southern peoples before their contact with the Indo-Aryan culture most probably had beliefs about the sanctity and power of food to transmit certain qualities very much like those of primitive peoples. This is why the restrictions on food and drink are so rigorous in South India, where, as we said, the Brahmin does not accept food or water at the hands of any one but a Brahmin". (pp. 145).

The reviewer in "Man" has put forward his own view of the origin of the caste system in the following words: "We are inclined to regard the caste system as the result of imposing the *varna* tradition upon the conditions found in India, and the influence of the Brahmanic hierarchy as having been exercis with the object of embracing within their fold the indigenous tribes and social groups and of establishing at the same time an organization that would conform broadly with the tradition of the sacred hymns". In fact this is the very explanation that has been adumbrated in my book as will be seen from some of the quotations from my book given above and also in chapters 5 and 7. Only I have thought it quite essential to go one step further back in search of the mode of development of the complex, which the reviewer in "Man" calls the '*varna* tradition'. I have tried to unfold its genesis in chapters 3 and 4; and therefore I have not used the expression '*varna* tradition' in the actual formulation of the theory of the origins of the caste system. Further, I am not satisfied that Brahmanic imposition alone explains the whole situation and have found it necessary to recognise the role of imitation as well. I have contended more than once that the Brahmins strove hard to accommodate the developing multiplicity of groups and their characteristics to their ideal pattern. On this point I shall make only one more quotation: "With all this multiplicity, however, to each group is ascribed some more or less definite occupation. It appears that in reality new occupational groups having the characteristics of castes had arisen, and combinations of the four original castes which bounded the Brahmin's mental horizon". (pp. 91).

While dealing with the classes or orders (*varna*) of society the reviewer in "Man" observes: "But we must be careful not to confound these orders of society, which may be traced in many parts of the old world in ancient times, with the complex 'caste' organization, with its peculiar characteristics as found in India and India alone". In chapter I of my book I have analysed the various elements that compose the 'complex caste organization'; and in chapter 6, I have brought together evidence on social differentiation among other peoples of the world. Comparing these two sets of data I have reached a certain conclusion, which is stated in the following words: It must be mentioned at the outset that all the literary accounts of the important aspects of caste centre round the four orders in society, namely Brahmin, Kshatriya, Vaishya, Shudra, and not the multifarious groups which are the present day caste : (pp. 39). Thus it would be seen that the Hindu system is unique only in this that it alone classified some groups as untouchable and unapproachable. In other respects it only differs in the thoroughness with which the scheme is worked out and in the number of differentiated groups". (P. 142) A perusal of the above-mentioned chapters of my book will, I hope, convince the reader of that book that I have not confounded the two phenomena which ought to have been distinguished.

About the Brahmanic literature cited in chapters 3 and 4, the reviewer in "Man" writes: 'The difficulty about the literature of Dr. Ghurye's second and third periods, cited in chapters 3 and 4, is to know whether it presents accurately existing facts or rather the ideals which its authors desired to enforce". But here is what I have said in the beginning of chapter 3 : "In this period (second) we have three types of literature which shed light on the subject. The sacred lore of the Aryans present the orthodox and the more or less idealistic stand-point while the epics testify to the contemporary practices. Buddhist literature, on the other hand, gives a glimpse of the institution as it appeared to those who rebelled against it, and, in part, provides us with a naturul picture of some aspects of caste. The third period may be styled the period of the Dharmasastras and ends with the seventh or eighth century A. D. Manu and Vishnu are the chief exponents of the social ideals of this age". (p.p. 39).

"The term 'caste' itself is not a happy one; and Ketkar and others have warned us against applying this word indifferently to the Sanskrit terms *varna* and *jati*, which we consider should be carefully differentiated". That I have given a careful consideration to this point with be clear from the following: "The word 'Jati' which is here used for *varna* henceforward is employed more often to mean the numerous sub-divisions of a "varna". It is also the vernacular term for a "caste". A rigorous demarcrtion of meaning between "varna" and "jati", the former denoting the the four large classes and the latter only their sub-divisions, cannot "Jāti" however, be maintained The word, is sometimes indiscriminately used for "varna". (pp. 51).

Of the last two chapters of my book the reviewer in "Man" makes the following remark: "The last two chapters have rather a political, or semi-political, trend and so need not be discussed here." In one of these two chapters, which is six times as large as the other, I have discussed the changes that have come about in the institution of caste as a result of the conditions created by contact with European culture and political domination by the British. The study of culture contact has latterly been one of the most fascinating and thought-provoking subjects among anthropologists and sociologists. Serious students of this subject have been discussing the effects of the contact of European culture on primitive peoples, whether they be in Melanesia, Malaya or Africa. And as early as 1914 Dr. Rivers in his paper contribted to the volume of "Essays presented to Sir William Ridgeway" pointed out the importance of India for the study of culture contact. And I think no serious student of Indian sociology should avoid the study of this very instructive aspect of the unique system of Caste in India.

G. S. Ghurye.

INDIAN ETHNOLOGY IN CURRENT PERIODICAL LITERATURE.

In the *Journal of the Royal Anthropological Institute,* for January—June, 1933, Mr. Walter Abboe contributes an article on "Social Functions in Lahul, Kāngra District, Punjab".

In the April (1933) number of *Man* is published the summary of a communication by Mr. K. de B. Codrington who has undertaken certain ethnographical investigations in the Deccan. He finds that "the sense of individuality among the peoples is very acute, especially among the wanderers", and points out that "there is a great need of a cultural survey of the objects of everyday life and glossaries of the common term of the countryside". He also finds that the same caste is known by different names in adjoining districts; thus, e. g. the *Pardhis* of the Deccan are actualy one with the *Wagris* of Gujarat. The *Waddar* stone-mason and earth-worker of the Telugu country is or was one with the *Bhamta* (notorious railway thief) who still talks Telugu at home. The *Kaikadi*, *Korwa*, *Korcha*, and *Yerkala* are actually one great people, straddling the whole Deccan, though their house-language shows Tamil connections. The anthropometrical measurements taken by him of some six hundred individuals indicate the extreme microcephaly of the people, and it is very important to accurately identify every individual especially as to the marriage area of his family.

In the May number of the same Journal, is given the summary of a communication by Mr. R. Edgar Cooper on "The influence of their Neighbours on the Bhutanese". The influence on Chinese culture may be seen in the carving of Chinese dragons on the portals of shrines. An interesting feature of the aboriginal *Chingmi* (lit., 'wild') is a pudding-bowl hat worn by the men, which is made of coarse felt and has five drip tips on its edge so disposed as to throw rain-water away from the nose, the chest and the back of the shoulders; and a still more interesting dress feature is a circular disc of felt suspended from the waist over the buttocks beneath the smock like a tail, which obtains for the waerers the name of the 'tailed folk'.

In the July (1933) number of the same Journal, appears Lieut.-Colonel R. H. Elliot's note on 'The Myth of the Mystic East', in which he suggests a few reasons for holding that the wide-spread belief that the East is the Home of Mystery is based on misunderstanding of facts, on inaccurate data and on faulty reasoning.

In the September number of *'Man'*, Mr. Ernest Mackay describes the process of the manufacture of decorated cornelian beads which he learnt from an old man of Sehwan in Middle Sindh (India).

In *Folk-Lore* for June 1933, appears a paper by Mr. M. E. Durham entitled "Whence comes the Dread of Ghosts and Evil spirits?" In this paper Mr. Durham adduces reasons to show that man's fear of the dead which is the origin of his fear of ghosts is in essence man's first vague and tentative recognition of infections diseases.

In the *Journal of the Asiatic Society of Bengal*, (Voi. XXVII, 1931, no. 2) issued in June 1933, appear an article by the late Prof. H. C. Das Gupta, "On a Type of Sedentary Game known as Pretva", an article on "The Social and Religious ceremonies of the Chākmās' by Dr. P. C. Bose, an short article on the 'Social and Religious Institutions of the Kharias' by Mr. B. K. Chatterjee; an article "On the Worship of the Deity Jalpeshvara in the district of Jalpaiguri" by Mr. S. C. Mitra and two particularly interesting contributions,—one on "Wild Man in Assam" by Dr. J. H. Hutton, and another on the "Wild People' of the Santals", by Rev. Dr. Bodding.

The *Journal of the Anthropological Society of Bombay*, for 1932 (published in 1933) contains the following articles :—"Something about Eyebrows" and "Some Riddles among the Women of Gujerat" by Mr. S. S. Mehta; "On a Thado Kuki Accumulation Droll", "A Notes on the Thado Kuki belief about the Were-lioness", "Note on Place-names in the Jalpaiguri District", "On a Few Ancient Indian Amulets and Charms", "On Ancient Indian Dream-Lore", "On Some Ancient Indian Beliefs about the origin of Child-birth", "Supplementary Notes on the Mundari Legends and Customs connected with the origin of the Names of Ranchi and some of its suburbs" and "A Note on Ghost-lore from the Jalpaiguri district", all by Mr. S. C. Mitra; and "Social and Cultural Background of the Amil Community of Hyderabad (Sindh)" by Miss S. C. Narsian.

In the *Quarterly Journal of the Mythic Society,* for April 1933, and also July 1933, Mr. L. V. Ramaswami Aiyar continues his article on "Two Dravidic Problems", and Mr. S. C. Mitra continues has "studies in Bird-Myths" and "Studies in Plant-Myths".

In the May (1933) number of *Trumali Sri-Venkatesvara,* Mr. A. Padmanabha continues his paper on "Early Dravidian Races".

In the *Indian Historical Quarterly* for June, 1933, Mr. Atul K. Sur in a Note on the "Origin of Indus Valley Script" points out that though the characters of the cave inscription at Vikramkhol in Sambalpur appears to belong to a period intermediary between the Script of Mahenjo-daro and the Brāhmī Script, the discovery made by M. Guillaume and announced by Prof. Paul Pelliot in the *Academie des Inscriptions et Belles Letters* of 130 examples of the 'most striking resemblances' between the Indus Valley script and the Easter Island Scripts complicates the problem.

In Vol. I, Part I of *Sankhya: The Indian Journal of Statistics,* Prof. P. C. Mahalanobis contributes an illuminating paper on 'Revision of Risley's Anthropometric Data relating to Tribes and Castes of Bengal".

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NOTICES OF BOOKS.

History, Psychology and Culture.—*By Dr. Alexander Goldenweiser (London: Kegan Paul, Trench, Trubner & Co. 1933). Pp. XII+475+XII price 18s. net.*

This is a most interesting volume in which twenty-three highly illuminating papers on social theory contributed to different periodicals during a score of years by the distingueihed author, have been collected and arranged in six parts as follows :—I. History, Psychology and Culture; II. Theories of Primitive Mind and Culture; III. Totemism; IV. Religion; V. Race; VI. Variora. A bibliography and an Index complet the volume. The learned author's treatment of some of the outstanding social, cultural and racial problems is most illuminating and helpful.

In Part One the author attempts to show that life is psychology and the life of culture belongs to the psychological level and, the theories of cultural anthropology are intimately inter-related with psychological insight; that the accidental factors and the deterministic tendencies appear as two inseparable ingredients of the historical process that develops culture; that the concepts of parallelism, diffusion, convergence, must each be regarded solely in the light of heuristic principles and cannot be directly utilized for cultural interpretations but thier guarded application may bring with it a rearrangement of cultural data inviting and facilitating such interpretations; and that certain cultural features of universal distribution can be interpreted psychologically; but where the cultural features are timely peculiarities belonging to a particular tribe, district or nation, they cannot be explained psychologically and must be accounted for historically; that every culture is largely independent of its environment in so far as it is a historical complex (involving invention and imitation) but in another set of cultural phenomena culture and environment co-operate and must be regarded as co-determiants (the same culture at different stages of its progress making different uses of the same environment and different cultures too making different uses of the same environment). In Part II, different theories of cultural origins are discussed. Part III contains an analytical study of Totemism and a discussion of its form, content and origin'. Dr. Goldenweiser concludes that "neither Nature-Mysticism nor the functioning in the form of a set of homologous units are inherently totemic traits:" but what opens up possitrilities for a totemic complex is the association of these features with a sib system. "Totemism flourishes only when carried by a sib system; and sib systems, on the other hand, are so frequently totemic as to invite the application of Tylor's fruitful concept—*adhesion*. Sib-system must have and do have a predilection for nature-mysticism". Part IV deals with Relegion and begins with a Critique of Durkheim's thoery of the Origin and Nature of Religion. By an analysis of Durkkeim's theory the auther shows that the identification of primitive religion with totemism and the totemic principle with *mana* is an error. The auther is further of opinion that Durkheim errs in claiming for *mana* and its emotional concommitant, the religious thrill, an exclusively crowd-psychological origin. According to our author's analysis, the essential and ultimate factors in magic and religion are two conceptional factors, namely, spirit and *mana*,—one emotional factor, namely, the religions thril,—and one activational, namely, the magical act which is "an expression in behaviour of certain desires", and though not religious "becomes early associated with the religious thrill on account of certain peculiarities in magical situations when compared to matter-of-fact situations". Part V treats of Race, and points out that all races are mixed, though owing to the operation of the Mendelian principle individuals or families of relatively pure type will at times appear; that specefic racial differences usually prove to be illusions and are not actually racial or hereditary but cultural or acquired by education and that all the races of man, as far as their availabidity for cultural purposes is concerned, are on a par and comparable, so that Man is One, though Civilizations are many both in variety and in achievement. For aught we know the potential psychic equality may be a fact. In Part VI, entitled Variora, the author compares the performance of men and women in creativeness, discusses Frend's Psychology and finds he is not, strictly speaking, a psychologist. The last paper is a dialogue between a Teacher and his Pupils, headed "Civilization as some School children see it". The book is a highly interesting and thought-provoking one, and will be a valuable addition to the sociologist's library. The get-up of the book is excellent.

The Frazer Lectures, 1922-1932.— *Edited by Warren R. Dawson (Macmillan, 1932), PP. XV+ 304. Price 15 S. net.*

This volume contains eleven lectures, delivered one each year from 1922—1932, in connection with annual lecturership in Social Anthropology founded in honour of Sir James Frazer to commemorate his important contributions to science and literature of which the crowning monument is the Golden Bough itself. The respective subjects of the eleven lectures are: I. *The Evolution of Kinship; An african Study*, By E. Sidney Hartland, II. *Immigrants and their Influence in the Lake Reyion of Central Africa.* By the Rev. Canon John Roscoe, III. *The Age of Gods*, By W. J. Perry. IV. *Myth in Primitive Pschology.* By Bronislaw Malinowski. V. *LaMise A'Mort Du Dieu en Egypte.* By Dr, Alexandre Moret, VI. *The Diffusion of Culture.* By R. R. Marett, VII. *The Study of Popular Sayings*, By Edward A. Westermarck. VIII. *The Religion of a Primitive People*, By A. C. Haddon, IX. *Les Oceaniens.* By Dr. Paul Rivet, X. *The Earlier Religion of Greece in the Light of Cretan Discoveries.* By Sir Arthur Evans. XI. *The Aryan Theory as it Stands*

Today. By Sir Arthur Keith. Most of these Lectures had already been published separately either in the form of pamphlets or in Magazines or expanded in book-form, and most of our readers must have already known, enjoyed and profitted by them. Each of these Lectures, prepared and delivered by a recognized authority on the topic of the lecture, is of absorbing interest and throws additional light on its subject-matter. The Introduction which gives a history of the origin of these Lectures, and a portrait of Sir James Frazer add to the value of the volume. The get-up of the book leaves nothing to be desired.

Sacraments of Simple Folk.—*By R. R. Marett (Oxford, Clarendon Press, London: Milford. 1933), PP. 225. Price 10 S. net.*

This is the second course of Lectures delivered by Dr. Marett on Lord Giffords Foundation before the University of St. Andrews during the academic year 1932—33. In the first course of Lectures which appeared under the little of "Faith, Hope, and Charity in Primitive Religion", Dr. Marret dealt with the religion of Primitive folk in its aspect of sentiment. In the present course of Lectures he has considered Primitive Religion with reference to its ritual or 'Sacramental' features: The ten Lectures are headed respectively,— I. *Natural functions and their Consecration* II. Eating, III. *Fighting*; IV. *Mating*; V. *Educating*;

VI. *Ruling*; VII. *Judging*; VIII. *Covenanting*; IX. *Healing*; X. *Dying*.

In the first Lecture, after defining a *Sacrament* as "any rite which by way of sanction or positive blessing invests a natural function with a supernatural authority of its own" and a *ritual* as "an organized technique, approved by the society concerned, for dealing with the incalculable element in any critical situation of human life," the learned Lecturer attempts to show that "of all ritual froms the sacrament is the most dynamic, coming to the aid of a given activity, at the point at which it finds itself baffled by nature in the shape of the contradictions of the sense-world, so as to turn it into a superactivity by bringing into play the latent energy of the moral personality". In the second Lecture Dr. Marett shows how the sacramental rites of the primitive man including those *rites of multiplication* which involve the solemn eating of the totem, symbolize his desire to be at one with the powers to which he looks for his 'daily bread'. In the third Lecture the Lecturer shows how acts of violence which must have been inevitable in the early man's struggle for existence are tempered with a sense of the sacredness of human life through association with religion, and the fighting spirit is diverted by sublimation to higher ends. In the fourth Lecture the author points out that the all-important central motive of the symbolical wedding rites would seem to be "to proclaim and solemnize, whether by ring, knot, eating together, or otherwise, that union implicit in the sexual bond itself, out of which the forms of political organization so directly arise". It is further suggested that the prime object of "the piacular aspect so strongly marked in primitive rites of marriage, may be "to avert ill will between the parties concerned rather than to promote a common blessing". In the fifth Lecture, the auther mentions certain Australian customs which give us "a glimpse of primitive ritual in the act of consecrating the natural impulse to train up a child in the way he shall go". In the sixth Lecture, Dr. Marett shows that in the rudimentary state of society the effective exercise of authority is essentially theocratic, a gift of wonder-working accompanies prowess and skill even in the headman of the loosely organized group, and, as centralization proceeds, the priest-king comes into being, whose sacerdotal functions reinforce his secular activities in all sorts of ways. As representing the luck of the community, however, the chief tends to be hampered by the endless taboos to which he is subject, while he may have to die prematurely so as to transmit his sacredness unimpaired. In the seventh Lecture, Dr. Marett briefly describes the slow and difficult establishment of the judicial method of settling disputes which has been greatly furthered by the belief that behind the decisions of the human tribunal is 'a judgment of God'. Though certain offences are regarded as 'sins' rather than 'crimes' for which the 'sinner' has to be removed by excommunication or death, and certain other offences may be righted by private vengeance, in the long run the public authority, largely assisted by religion institutions such as the ordeal and the oath, takes over the entire administration of law, both criminal and civil. In the eighth Lecture, the author gives a sketch of the early history of covenant and shows that "despite the so-called 'magical' accompaniments, which amount to no more than a material symbolism misread, the covenant of blood or of gift is all along, in its underlying motive, a covenant of grace". Primitive religion has helped to establish the sanctity of covenant or contract by threatening faithlessness with a conditional curse and by regarding an exchange of gifts or services quite apart from considerations of profit, as a communion on a par with the blood-covenant. Early barter is a secondary development of meetings primarily intended to foster mutual friendship by the giving and receiving of luck-bringing objects. In the ninth Lecture Dr. Marett shows that the chief interest and objective of primitive medicine, whether as exercised in the community or in its members singly is to restore to his patient 'spiritual health' on which physical health depends. The primitive-medicineman is essentialy a soul doctor, and has to undergo a strict training and observe the severest taboos, in order to preserve his power over forces of evil. Primitive society views disease as a "spiritual visitation, the result of an enemy's spells or of the patient's own sinfulness, so that the medicine-man's cure takes the form of exorcism designed to dispel fear and restore confidence. Accidentally, however, many of such methods of expelling evil by means of blood-letting, purging, trephaning and so on have a physical no less than a moral effect. In the ninth and last Lecture the distinguished author shows how in face of the supreme mystery of death primitive religion, from prehistoric times onwards, has by means of funeral rites given various expression to a steadfast faith in the reality of a future life; and although a certain conflict may be noted between a fear of the contagion of death as represented by the corpse or ghost and an affectionate desire to further the welfare of the deperted in whatever abode he is supposed to dwell. On the whole, however, love prevails, and the primitive community believes itself to be in friendly touch with ancestral spirits whose semi-divine powers are always at the disposal of the tribe if proper respect is paid to their wishes. Thus religion converts death itself into a source of hope and comfort.

This volume, like its predecessor—"Faith, Hope and Chairty", should form an indispensable companion to the student of Social Anthropology.

Origins of Sacrifice A study in Comparative Religion :—*By E. O. James (John Murray) 1933. Price 10s. 6d. Pages XVI+314.*

In the present volume the author has attempted to trace historicolly and analyse critically the complex institution of sacrifice as it is prevalent throughout the world from prehistoric times down to the present. He has begun from the blood offerings and vegetation offerings of primitive people and has shown how through the course of centuries the cult of sacrifice has taken different shapes such as human sacrifice, head-hunting etc. and how rituals and mystery cults are connceted with it. He has not only considered it from the anthropological standpoint but also from the psychological and even from the modren Freudian standpoints. He has proved that the institution of sacrifice is associated with all forms of religious rituals, but that with the growth of ethical concepts and on account of religious ideas having been more spiritualised in recent years, sacrifice is now indicative of higher human values and has thus undergone a new orientation. "The history of ritual is the histcry of religion and the rituality of sacrifice is shown by its remarkable power of survival when the ancient myths and rites are being reinterpreted as symbols of metaphysical and ethical concepts".

The book is the first systematic attempt to review the whole institution of sacrifice in its cultural setting and Dr. James has removed a long-felt want. An interesting feature of the book is that the learned author shows a fairly correct conception of the Hindu idea of sacrifice. The book contains an index and a valuable and enhaustive bibiliography.

Early Beliefs and Their Social Influence :- *By Edward Westermarck. (Macmillan. 1932) pp. 182. Price 7s. 6d. net.*

In this volume the author deals with the influence that early religions and magical beliefs have exercised upon certian social relationships and institutions. In chapter I., Dr. Westermarck begins with an examination of the views of other writers and then goes on to explain his own views on religion and magic, and in successive chapters he deals with the 'Political and Moral Influence of Early Religion', 'Respect for Private property ;– Charity',. 'Hospitality;—the Right of sanctuary'; The Subjection of Children: Regard for Truth and Good faith. The Oath". 'The ordeal.—Regard for Human Life—Justice—Criminal Law',. 'Duties to Gods'; 'Marriage', Religions Celibacy, and Sexual Relations—Religious Prostitution' ; 'Marriage Rites'; and 'The Position of Woman'. The present volume is, as the author tells us in the preface, based on his former works, which are familiar to most students of Social Anthropology. Though many sociologists may not agree with Dr. Westermarck in all his views, there can be no question that his theories, as succintly but clearly set forth in this book, are thought-provoking.

The Nicobar Islands and Their People :—*By E. H. Man, with a Memoir contributed by Sir David Prain (Billing and sons, for the Royal Anthropological Institute). Pp. X+186. Price.*

This account of the Nicobarese is written in the light of long and intimate acquaintance of the people, their language, customs and mentality, by a sympathetic administrator. It is unfortunate that the author could not himself arrange and remodel into the form of a monograph on the Nicobarese the mass of very valuable materials which he left in the form of 'notes'. Some of the materials were however reduced by the author himself into the form of articles and were published from time to time by the Royal Anthropological Institute and other learned societies. The Editor of this volume, Mr. L. H. Yates, has admirably performed his self-imposed task of bringing into proper relation and putting into concise form the scattered notes left by the author. The present volume will long remain the standard work on a most interesting primitive community. A number of excellent illustrations and the three maps add to the interest and value of the book.

The Old Stone Age. A study of Palaeolithic Times :—*By M. C. Burkitt. (Cambridge University Press, 1933). Pp. XIV+154. Price 8s. 6d. net.*

A book by Mr. Burkitt on any department of "Pre-history" does not require commendation. Such a succint and yet comprehensive study of palaeolithic times as we have before us in this handy volume can only be expected from an accomplished scholar who has thorough mastery over his subject. As is inevitable, in a small volume of this size, the author can only give generalised accounts of the various cultures dealt with, but the accounts given in the volume are very lucid and comprehensive; and, so far as cave art is concerned we have a fairly detailed account of it and the motives underlying its production. The book will be read with interest and profit not only by the student of anthropology and archaeology but also by the general reader.

Primitive Arts and Crafts: An Introduction to the Study of Material Culture.—*By R. U. Sayce. (Cambridge University Press, 1933). PP. XIII+291 Price 8 s. 6 d. net.*

All anthropologists will heartily welcome this book which is in a way the pioneer work in this line. Within the present limits of space, the author can give only a limited treatment of his subject. And so he has contented himself with a general introduction to the study of Material Culture and a review of some of the main principles involved, the ways in which changes and developments may be brought about in material culture and the rate at which culture may change. The book is well written and will eminently serve the purpose for which it is intended.

Rise of the Christian Power in India.— *By Major B. D. Bose, (Second Edition, R. Chatterji, Calcutta, 1931). PP. VIII+1011. Price Rs. 15 net.*

The history of the establishment of British supremacy in India is given in this book mostly from original sources and, as far as possible, from accounts contemporaneous with the events narrated. In the Introduction a brief account is given of the struggle between different Christian Nations for supremacy in India. The book proper begins with the commencement of hostilities between the then Nawab of Bengal and the East India Company in the middle of the 18th century and ends with the termination of the East India Company's rule in 1858. The book is packed with facts and details some of which will be new to most readers. This ponderous but well-written volume testifies to the considerable industry, erudition, critical acumen and literary skill of its talented author. In the light of the evidence brought forward in this book some of our cherished notions as to events and men may require reconsideration and revision.

Myths and Ceremonies of the Mandan and Hidatsa.— *(Second series) Collected by Martha Warren Beckwith. (Vassar College, Poughkeepsie, New York. 1932). PP. 117—267.*

This is number 12 of the Publications of the Folk-Lore Foundations, Vassar College. The series of stories collected in this volume are meant to bring out the relation of mythology to ceremonial. The Introduction, the Explanation appended to the first story and some of the foot-notes are helpful towards a proper appreciation of the stories and their significance.

Egyptian Religion.—*Vol. I. no. 2. Edited by Samuel A. B. Mercer. (Alma Egan Hyatt Foundation New York. July 1933).*

We accord a hearty welcome to this Journal of Egyptian Religion edited by the Professor of Egyptology in the University of Toronto, Canada. It promises to be of invaluable help to students of the ancient civilization of Egypt.

Rigveda Samhita.— *Part I. (Indian Research Institute, Calcutta, 1933). Price Rs. 1-8 as. (India), 2 S. 6 d. (foreign).*

This is the first instalment of a new edition of the Vedas which the Indian Research Institute has taken in hand. Judging by the excellence of this first part, we may look forward to possessing within a reasonable time a scholarly and dependable edition of the Rig Veda with the text in as much of its original form as possible with proper accent marks, appropriate extracts from authoritative commentators, an English translation in the light of Sayana's commentary, critical notes embodying different interpretations by recognized scholars, besides Bengali and Hindi translations of the text with explanatory notes. All students of Comparative Religion as well as students of Indology and of the Hindu Religion, will welcome this ambitious publication.

Travancore Census Report, 1931 :—*By Rao Sahib N. Kunjan Pillai, (Trivandrum Government Press 1932). Pp. X+523. Price Rs. 6.*

An interesting feature of the Reports of the Census of 1931 is that some of the Reports prepared by Indian Census Superintendents are among the very best. Such was the Baroda Report prepared by Mr. S. V. Mukerjea, which was reveiwed in our issue of September last year. The Travancore Report by Dr. Pillai has, we are gratefied to find, attained the same high standard. Dr. Pillai has collated, sifted and systematised a vast mass of statistical and other data, and evaluated and interpreted them with sound judgment ond human sympathy, and presented his facts and infereness in a lucid style. Where everything is first-rate it may appear invidious to select for particular mention any particular portions. But it is obvious that to anthropologists the chapters on 'Religion', 'Caste, Tribe and Race', and the Appendices to those chapters will be of the greatest interest. These portions, like the rest of the volume, have obviously been written in the light of scientific knowledge of the subjects dealt with and close personal acquaintance with the people in question. A number of good photographs of primitive human types of the State, their primitive habitations, and primitive modes of handling their rude weapons and fire-prodncing apparatuses, add to the value and charm of the ethnological part of the volume. May it not be reasonably expected that the liberal and enlightened State of Travancore will lose no further time in prodncing a suitable work on the Tribes and Castes of that State as its sister State of Cochin has done? The talented author of the present Census Report and his ethnological assistants, if entrusted with such work, can, it is obvious, be very well expected to accomplish their task with credit to themselves and to the State, as they have done in the preparation of the Report under review.

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By RAI BAHADUR SARAT CHANDRA ROY, M. A., B. L., M. L. C.

Price.—*Twelve Rupees.*

SOME OPINIONS ON THE BOOK.

Col. T. C. Hodson, M. A., *Reader in Ethnology in the University of Cambridge* :— "A book like this—sane, clear, scientific, sympathetic, comprehensive—is of prime importance to the student of Anthropology, to the student of Religion and to the Administrator who seeks or should seek to understand the forces which govern human activities, and it is full of charm and interest for the general reader who desires to know something at once accurate and inteligible of the Peoples of India".

Dr. R. R. Marett, M. A., D. Sc., *Rector of Exeter College Oxford* :—"In my opinion the latest work of Rai Bahadur Sarat Chandra Roy, namely, *Oraon Religion and Customs* (Ranchi, 1928), fully maintains the high standard of accurate observation and critical interpretation already reached by him in his well-known researches for which European scholars are exceedingly grateful ; for it is obvious that, so long as he accepts the same canons of inductive enquiry, the Indian investigator has a better chance of probing and penetrating to the truth in regard to all things Indian and especially in regard to the psychological facts."

Sir Arthur Keith, M. A., M. D., L. L. D., F. R. C. S., F. R. S., :— "I am very conscious of the great work you have done and are doing. There is no school or college of Anthropology but will make a special place for this your latest work both on its library shelves and in its heart. I doubt if any one has ever done so much for the Anthropology of a people as you have done for the Oraon. I endorse all my friend Col. Hodson has written in his preface and in particular would I underline your disinterested and persistent labour for the advance of Science".

Dr. Roland B. Dixon, A. M., Ph. D., *Professor of Anthropology in the Harvard University, Cambridge, Mass.,* :—

I was delighted to get your recent book on *Oraon Religion* and have reviewed it for the American Anthropologist. The

book carries on the high standard which you have set in your previous works, and presents the material in a very effective from. I congratulate you on it most cordially.

The Times (London, February 28, 1929):— A very detailed account of the religion and magic of the Oraons of Chota-Nagpur, a people of Dravidian speech. It is based on twelve years' investigation by a highly competent ethnologist, who has already published a work on this people. It can be seen what a rich field there is in India among the more primitive peoples, which, indeed, can best be tilled by trained Indian ethnologists. There is a long chapter also on movements during the last hundred years and more among the Oraons towards a higher, simpler religion, which will interest students of religious psychology.

The Nature (London, March 9, 1929):— Ethnologists are indebted to Sarat Chandra Roy for his valuable book "*The Oraons of Chota-Nagpur*" (1915), and now he has provided a study of *Oraon Religion and Customs* which should be read by all those who are interested in primitive religions. The especial value of this book is not merely in the detailed accounts of socio-religious and religious rites and ceremonies and magical practices, but in the very suggestive religious transformations that have occurred since the Oraons arrived, and the process is still continuing.

The Discovery. (London, February 1929):— When the history of ethnological study in India comes to be written, the name of the author of this work is least likely to be overlooked. By his own work and by his encouragement of others as editor of the periodical *Man in India*, he has deserved well of his colleagues in anthropology. Sarat Chandra Roy has published here the promised continuation of his studies of the *Oraon* of which the first instalment appeared as long ago as 1915. The author is here concerned only with their religious and magical beliefs, both directly in themselves and in their relation to the Oraon social institutions, such as are involved in birth, marriage and death. Of particular interest to students of folklore and primitive religion are the sections dealing with agricultural ceremonies and the belief in witchcraft which afford much useful material for both comparison and contrast with European folklore.

A final chapter deals with revival movements and modern tendencies in Oraon religion which is highly suggestive and deserves the careful attention of all who are in any way interested in or connected with the problems of administration among peoples of non-European culture.

The Statesman (Calcutta, March 17, 1929) :— The Rai Bahadur is wellknown for his excellent monographs on the *Mundas* and the *Oraons*, and is everywhere recognized as an anthropologist of rare insight. India, with its great variety of races, nationalities, creeds, customs, and cultures affords an excellent field for the anthropologist and sociologist. This new book will be studied with delight by scientists in many countries. The author has made a capital use of his opportunities of studying the several tribes of aborigines in Chota-Nagpur and Central India.

The Forward (Calcutta, February 19, 1929) :— The learned author is a pioneer in the field of anthropology and needs no introduction. His previous works— *The Birhors, The Mundas* and *The Uraons* are classics and had already established a world-wide reputation for him. The present volume is a befitting successor to his previous works. It is the outcome of the author s deep and laborious investigations into the religion and customs of the *Oraons*, a much-neglected tribe of Chota-Nagpur, carried on for a long period of about twelve years and as such an invaluable treasure to students of anthropology and students of religion.

The get-up of the book is excellent. In short, the book leaves nothing to be desired.

The Servant of India (Poona, May 30, 1929) :— The book is worthy of the author, Rai Bahadur S. C. Roy of Ranchi, who is a well-known student of anthropology relating to the aboriginal tribes of Chota-Nagpur and the Central Indian Plateau

The chapter on socio-religious rites and ceremonies is very interesting and demands careful study. The last chapter on the *Oraon Religion* with its revival movements is exceedingly instructive.

We strongly recommend the book to students of anthropology as well as to the general reader.

The Modern Review (Calcutta, January, 1929) :— Rai Bahadur Sarat Chandra Roy is one of the few Indians who has shown a keen interest in the study of the primitive folks of this country. In fact, the works that he has already published have earned for him the reputation of being the foremost authority on the aborigines of Chota-Nagpur. The present volume on *Oraon Religion and Customs* is the sequel to his earlier work on *The Oraons of Chota-Nagpur* (1915). In it the Rai Bahadur has given an exhaustive account of the religions and social institutions of this interesting tribe, the result of close personal observation and intimate acquaintance spreading over a period of twenty years. He has analysed the Oraon beliefs into their purely religious and magical sides and has described the customs and rites associated with the chief crises of life. As an authoritative treatment therefore of Oraon life in all its phases, including some of the modern tendencies, his account could hardly be improved.

The book is well-printed and illustrated and the price is moderate for a work of this kind. For students of Anthropology in the Post-Graduate classes of our Universities it should form a very handy and reliable text-book for some of their courses.

The Quarterly Journal of the Mythic Society (Bangalore, July, 1929):— Rai Bahadur Sarat Chandra Roy is too well known in the anthropological world to need any introduction. The publication of a volume on *Oraon Religion and Customs* was foreshadowed in 1915, when his *Oraons of Chota-Nagpur* first appeared. He has since been engaged in the investigation of their religion and customs for well-nigh twelve years, and the results are embodied in the present richly illustrated volume.

The work is full of charm and interest to the general reader who desires to know something of the religion and customs of this interesting people. We have great pleasure in commending this volume to all students of anthropology.

2. THE BIRHORS : *a Little-known Jungle Tribe of Chota-Nagpur.*—By Rai Bahadur Sarat Chandra Roy, M. A., B. L., M. L. C. Pp. viii+608, 36 plates. (Ranchi : "*MAN IN INDIA*" Office, 1925).

Price Rs. 10- ; or 15 s.

SOME OPINIONS.

SIR JAMES G. FRAZER, D. C. L., L. L. D., Litt. D., F. B. A., F. R. S., O. M., Professor of Anthropology in the Trinity College, Cambridge writes :—

.........I find it characterised by the same high qualities a mark your former monographs on the Mundas and Oraons. You have rendered a valuable service to anthropology by placing on record the customs and beliefs of a very primitive tribe about which very little was known before and which, but for your careful and prolonged observations, might have passed away practically unknown. As in your former volumes I admire the diligence with which you have collected a large body of interesting facts and the perfect lucidity with which you have set them forth. The book is a fine specimen of a monograph on an Indian tribe and must always remain the standard authority on the subject. I congratulate you heartily on your achievement, and earnestly trust that you will continue your valuable investigation and give us other similar accounts of other primitive and little known Indian tribes.

SIR ARTHUR KEITH, M. D., F. R. C. S., L. L. D., F. R. S., Conservator of the Museum and Hunterian Professor, Royal College of Surgeons of England, writes :—

........You have done a splendid piece of work—one which will make Europe indebted to you.........

DR. A. C. HADDON, M. A., SC. D., F. R. S., Reader in Ethnology, of Cambridge, writes :—

........Your accustomed excellent work. It is a most useful contribution to Indin Ethnology.........

DR. ROLAND B. DIXON, A. M., PH. D., Professor of Anthropology in the Harvard University writes :—

.........You are certainly doing work to be proud of in the studies you have published of the Chota-Nagpur tribes, and all anthropologists are in your debt. If only we could have similar studies of all the wilder peoples of India, how fine it would be !...........

THE NATURE, (London : September 19, 1925):—

........Students of Indian anthropology are deeply indebted to Mr. Roy for the light he has thrown on the past and present culture of the Chota-Nagpur plateau. In the *Bihar and Orissa Research Society's Journal* he has opened up new ground in the archaeology of his area. His monographs on the *Mundas* and *Oraons* are classics. "The Birhors" is yet another first-rate study, a study not merely of an obscure tribe but also of the workings of that mysterious complex of thought and feeling which go to make up human culture.................. Mr. Roy is never a theoriser or a partisan ; his diction is simple and precise, his inpsiration comes straight from the hearts of the humb folk he has made his friends.

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It is a work of great interest and high value as a full and accurate description of an Indian Hill-tribe. I congratulate you on having produced it. You must have given much time and labour to the researches which you have embodied in this book. But the time and labour have been well spent. The description seems extremely clear and well written in the simple language which is appropriate to the theme, and the translations of the poetry are charming.

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I. FOOD AND DRINK IN ANCIENT INDIA.

By

Rai Bahadur Joges-Chandra Ray, M. A.

Introduction.

The subject of Food and Drink in ancient India has not recieved attention of scholars except in parts. In 1927 while delivering before the University of Calcutta Adhar-Chandra Mukherji lectures on Ancient Indian Life, since published in the Calcutta Review in the September and October issues of the year, I felt the need of a survey of the whole field. An attempt has been made in this paper to supply it.

I have divided the subject into three chapters. The first chapter deals with food grains known from the earliest time down to the 16th cent. A. D. The sources of information are Vedic literature, Smṛtis and Purans, Kauṭilya's *Arthas'āstra*, Amara-Kos'a, and the medical works of Caraka, Sus'ruta and Bhāvaprakās'a. Since the date and place of Kauṭilya are definitely known and since he describes the foodgrains, provisions and drinks in details not found elsewhere, I have devoted more space to him than to any other. The medical works of Caraka, and Sus'ruta are undoubtedly valuable repositories of information on the subject, but from the progressive nature of Medical science, they were liable to interpolation and revision. Not so the Smṛtis which had a long tradition behind them.

The second chapter deals with food and provisions. In this I have adopted Kauṭilya as the basis and supplemented the account by information gathered from other sources. In the matter of animal food I have to content myself with what is found in Kauṭilya and Smṛtis. If one were to name all the animals which supplied food one would have to write a treatise on Zoology.

The third chapter deals with intoxicating liquors. In this case also Kauṭilya has supplied details of ingredients and process of manufacture, which the medical writers assumed as generally known. I have reserved the identification of the Soma plant famous in Vedic literature for a separate paper.

In dealing with the subject we have to remember that our information based on Sanskrit literature relates to Northern India from the Punjab on the west to Bihar on the east. But though the area is thus limited it presents remarkable variations in soil and chiefly in climate and rainfall. All the food crops known at any time cannot be successfully cultivated everywhere. An attempt has been made here to localise them by taking up all the food-grains found mentioned in each of the works consulted. This necessarily involves repetition, but has the advantage of checking identification and presenting a complete view of the subject in a particular place and time.

The period of time covered in this study is vast, extending from the time of the Rig-Veda to that of Bhāvaprakās'a (1600 A. D). No single date can be assigned to the entire Rig-Veda, and though some of the portions may have been as late as the 15th cent. B. C., the date of the Mahābhārata war, there are astronomical reasons to believe that the Aryans had been living in the Punjab as early as 4500 B C., and pursuing agriculture. Of the numerous Purans the Vāyu and Matsya, are the oldest, and were in many parts composed two centuries later than the war. They record an interesting tradition about the dawn of civilization. It is stated that "people began to build houses and live in hamlets, villages, and towns for the first time in the Tretā Age, and that it was during this period that they began to grow crops. At first their huts were made of timber covered with a roof of boughs and twigs arranged as in a tree. Formerly the people depended for their subsistence on what could be procured from nature. They did not give up this practice for a long time even after they had recourse to agriculture. They raised seventeen food-grains, but these were not considered "pure" for use in religious sacrifices. Fourteen food-grains, some wild others raised, were censidered proper for these rites".

This account of the dawn of civilization is in complete accord with its history derived from antiquarian research. It is well known that the Aryans at first led a pastoral life and began gradually the practice of agriculture. What concerns us here is the fact that people adhere to old customs in religious and sacred matters even after lapse of millinaries when new conditions of life had appeared. Hindu scriptures enjoin the use of certain food-grains in religious rites and prohibit the use of others. This affords a sure test for distinguishing those which were exotics and were introduced later from those which were indigenous and used in prehistoric times. The fourteen "pure" grains had been long under cultivation before the war, and the cultivated seventeen included some of later date. What these were will be considered in their proper place. In the meantime we may form an idea of the antiquity of Aryan agriculture in India from the chronology of the Ages. According to the Purāṇas the Tretā Age commenced in 6500 B. C. and ended in 3500 B. C. This estimate agrees with facts derived from our present study.

Let us, for instance, take wheat. The question is whether it was known to the Aryans of the Rig-vedic times. There are three reasons for believing that it was not. One is, wheat is not indigenous in India, and the first Aryan settlers in the Punjab could grow only those food crops which they found near about their homes. The second is, wheat was never recognized as "pure" for religious rites until very late and only by a few Smṛtis. Hindus offer barley and Sesamum along with water to their deceased ancestors and never wheat. In oblations offered to the manes they still adhere to rice and never think of wheat. The idea was that the ancestors would be satisfied only by those articles of diet to which they were accustomed while living in this world. This ban against wheat as against lentil and a few other food-grains can be explained only on the supposition that these were exotics and were unknown to the early Aryans. The third reason is, the name of wheat does not occur in the Rig-Veda. The only names we meet with in the Veda are *java*, barley, *tokman*, oats, and *dhānya* which apparently included all food-grains. What the dhānyas were, we do not exactly know. But *Vrīhi*, summer rice, was certainly one, and from later literature we may be sure that there were certain millets too. The name, *godhūma*, wheat, occurs for the first time in the Yajur-Veda, an off-shoot of the earlier Rig-Veda, and first compiled in about 2500 B. C. It is therefore clear that wheat was introduced into India some centuries before this date. The discovery of wheat in the ruins at Mohenjodaro which have been assigned 3250 B. C. solves the question. The Indo-Aryans were certainly aware of the mouth of the Indus and very probably got wheat seed from the people who had built their city near it. The latter again had brought it from Mesopotamia, its home. If this surmise be true, it becomes easy to understand when and how wheat and probably also lentil were introduced into India. Of course it is assumed that the grains found in the excavation of Mohenjodaro are really wheat, *Triticum*, and not the wild rice of the Indus which simulates wheat and was sometimes mistaken as such. (See Sir George Watt, *Com. Prods. of India*. P. 823).

It may be argued that the mention of wheat in the Yajur-veda is of later date when Veda-Vyāsa re-arranged it for the last time. He flourished in the time of the Mahābhārata war. This, however, implies that wheat had become a familiar crop by the time of the war. There was commercial intercourse with the people of western Asia. There were the Paṇis, the shrewd and calculating Aryan traders, mentioned in the Rig-Veda, and it may be said that it was they who brought wheat to India. But why should they have brought the seed of a crop which had been under cultivation nearer home? There is therefore no escape from the conclusion that the Rig-Vedic Aryans had been living in the Punjab long before another branch of the Aryans came from Sumeru in Central Asia and settled in Sind.

As far as history goes the next opportunity for the introduction of exotic crops arrived between the seventeenth and fifteenth century before Christ, when Babylon and Egypt were under Aryan domination. Some of the Aryans went from India taking with them the ancestral worship of Indra whose blessings were prayed for in the new country perhaps for winter rain. We do not know for certain the new crops introduced into India as the result of the intimate contact with the western parts of Asia. Probably field-pea and white rape were the arrivals. Since then the intercours never ceased and again became intimate with the arrival of the Greeks. Gram, Aṛhar *(Cajanus)* and Cinā, the common millet, appear to have come with them. The reader is referred to Sir George Watt's *Com. Prods. of India* for their habitat.

Another evidence of high antiquity of Aryan civilization in India is found in the presence of an enormous number of races of rice, and Sir George drew pointed attention to this fact almost half a century ago in his *Dic. Econ. Prods. of India* (Vol. VI. p. 529). A collection was made in the Indian museum and it came to something like 4000 forms. These were the rices of Bengal alone. He wanted much longer antiquity for the Aryan civilization in India than what the western scholars would allow. In 1908 his *Com. Prods. of India* was published in which he reverted to the subject and answerd the question himself. He remarks (P. 828) that "these are probably not distinct, but even if halved, the number would still be sufficiently significant of the vast antiquity of cultivation". He mentions that in Burma a few forms only constitute the chief crop. As the question has been presented the lapse of six or seven thousand years would not satisfy the demand. Probably the original natives of India some of whom were as civilized as the Aryans and against whom the latter had to fight many a hard battle had been cultivating rice probably derived from more than one variety before the Aryan invaders came. The process of change went on in all parts of the vast continent evolving forms best suited to the conditions of soil, warmth and moisture peculiar to each. The various forms are usually classified accordiug to the season of their harvesting. Caraka mentions four classes, *viz* (1) Shashtika, 'ripening in sixty days', the summer crop; (2) Vrīhi, of the rainy season; (3) S'ārada, of autumn; and (4) S'āli, 'the best', of winter. The only other class known is the rice of swamps, the Boro of Bengal, ripening between April and May. It is, however, well-known that Vrīhi seed may be used for raising Boro. There is thus easy gradation from one class to another. Unlike other cereals paddy appears to possess an adaptability to varied conditions within certain limits. The number of culvated forms recognized in Northern India is not known. But while these considerations reduce the antiquity demanded by Sir George, the evolution of even 500 forms in Northern India since the arrival of the Aryans cannot be accounted for without admitting long antiquity.

A similar difficulty arises with the sugar-cane which had certainly limited cultivation, and yet Caraka noticed ten district forms one of which was wild at the beginning of the Christian era. The Rigvedic Aryans were unacquainted with any other sweet than honey, and it was the only sweet that was prescribed for use in religious rites and even for welcoming honoured guests. In later times *guḍa*, ball-shaped lump of dried up juice of the sugar-cane was permitted as a substitute. This history shows that the cane is indigenous to India, and we must look for its cultivation long after the Rigvedic Aryans had settled in the Punjab. Probably the Ikshvākus were the first planters and owed the family name to *Ikshu,* the 'desired' sugar-cane. Their home was in the United Provinces which still head the list of areas under it. Geneological tables would place the founder of the family in the third millinary before Christ. Intensive cultivation aided by natural conditions must be held responsible for the evolution of nine forms in three thousand years. The cultivation spread to north Bengal at an early date, and the country was named Puṇḍrabardhana, the grower of Puṇḍra, the long cane. This cane is still cultivated in many parts of India under slightly altered names of Puṇḍra or Pauṇḍra.

I. FOOD-GRAINS.

(i) In Vedic and other sacred literature (Punjab and U. P. 2500 to 1000 B. C.)

In the Rig-veda there is incidental referance to *yava,* barley, *tokman,* oats, and *dhānya,* which was a common name for all food-grains. *Vrīhi,* summer rice, and *tila,* Sesamum, were at least two of the dhānyas of the Rigveda. The word, dhānya, literally means that which is desired, and the word Vrīhi, that which sustains, and the two words were sometimes used as synonyms. The Indo-Aryans at first settled in the western Punjab and depended upon scanty rains in summer and winter for their cultivation. Vrīhi, yava, tokman and tila and some millets were the only crops which naturally became possible under the conditions. The poets of the Rig-veda prayed to Indra for summer rain and Pushan for autumn rain.

In the Yajurveda (*Vāj. S.* XVIII, 12) which probably was compiled in the eastern Punjab we meet with the names of a dozen food-grains which were considered proper for use in sacrifices. These are: (1) Vrīhi, known as Ās′u in later times, Beng. Āus′, the early rice, ripening about the end of the rainy season. (2) Nīvāra, regarded as the rice of hermits, Beng. Uṛi or Jhaṛā dhān, a form of wild rice,—*Oryza sativa, var. fatua.* Prain. (3) Yava, barley. (4) Godhūma, wheat. (5) Priyangu, known also in later Sanskrit as Kangu, Kanguni, Beng. Kāon, Kāngni,—*Setaria italica (Panicum italicum).* The grains are the smallest of all millets, about 20 going to an inch in length and 14 in breadth, clean, shining and yellowish. It was another foodgrain of hermits, and still esteemed "pure". (6) Aṇu, 'the small' in the size of the plant, Beng. Gandlu, is another millet,—*Panicum miliare.* (7) S′yāmāka, the s′yāmā grass, considered a weed in Bengal, *Panicum frumentaceum.* (8) Māsha, a pulse,—*Phaseolus mungo.* (9) Mudga, a pulse,—*Phaseolus radiatus.* (10) Masūra, lentil.—*Lens esculenta.* (11) Khalva (?). The name is perhaps derived from Khala, a threshing floor. Probably it denoted some wild grain. (12) Tila, the oil seed,—*Sesamum indicum.* Besides these twelve, there are (11) Gavethu, Beng. Gaṛgaṛa, considered a weed in Bengal,— *Coix lachryma-Jobi.* Its culm was used in making rope. (12) Jartila, wild Tila.

From the above list it appears that wheat and lentil, though originally exotics, had been familiar crops and had lost the foreign flavour as early as the time of the Yajurveda. But the Vāyu and Matsya Puraṇas have preserved the ancient memory, excluded Masūra, and given the following fourteen names of sacrificial grains :— (1) Cereals,—Vrīhi, nīvāra, yava, godhūma, priyangu, aṇu, s'yāmāka, gavethu, veṇu-yava ; (2) Pulses,— Māsha, markaṭaka, kulattha ; (3) Oil seeds,— Tila, jartila.

The grouping into three classes is mine. Veṇu-yava is the grain of the bamboo. Markaṭaka is the wild form of mudga, generally called Makushṭa, Beng, Kheṇṛi, Hindi moṭh,—*Phaseolus aconitifolius.* Kulattha is kulti or kurti in *vern. Dolichos biflorus.* The Vāyu Puraṇa reads Kuruvinda in addition to the fourteen evidently through oversight. The name occurs in Caraka among the millets. Probably it was the brown Priyangu. It is stated in the Puraṇas that of these fourteen, some were wild, and others cultivated. The Vishṇu Purāṇa though later has also named them.

The earliest memory is preserved in Manu, the first law-giver. He prescribes for offer to the manes vrīhi, yava, māsha and tila. Later as knoweldge advanced, other food-grains were added.

Thus Us′anas directs the offer of vrīhi, yava, godhūma, nīvāra, priyangu, s′yāmāka, māsha, mudga and tila. Still later Kātyāyana and Vishṇu added white s′arshapa, white mustard, which was known to Kauṭilya in the 4th cent. B. C.

The three Purāṇas, however, knew seventeen food-grains which were obtained by cultivation. These were,—(1) Cereals,—vrīhi, yava, godhūma, priyangu, aṇu, kodrava, udāra; (2) Pulses,—māsha, mudga, masūra, kulattha, satinaka, nishpāva, āḍhaki, caṇaka; (3) Oil-seeds,—tila, s′aṇa.

The Vishṇu Purāṇa has cīnaka for satinaka. The latter is a name of Kalāya, *vern.* maṭar, the field-pea,—*Pisum arvens.* Of the other new names, kodrava is *vern.* kodo, considered a weed in Bengal,—*Paspalum scrobiculatum.* Udāra is the same as Dāraka of Kauṭilya, and Uddālaka of Caraka and Sus′ruta, and known as Kheṛi in Bihar and the dry western parts of Bengal. It is a form of Kodrava. Nishpāva, mākhan sim in Beng. a white and large Simbi,—*Canavalia ensiformis.* Āḍhaki is aṛhar,—*Cajanus indicus.* Caṇaka is Caṇā of Hindi and old Beng., gram. in Eng.—*Cicer arietinum.* S′aṇa usually denotes the fibre-yeilding plant,—*Crotalaria juncea.* But its seed is not edible. Nor does it contain sufficient oil. It was *Cannabis* hemp. (See Sec. III). It was a dhānya, and its seed was eaten. In course of time it became customary to count seventeen dhānyas, food-grains. Kshīrasvāmī (1100 A. D.) in his commentary on Amara-Kos′a quotes a verse enumerating the seventeen dhānyas. He has, however, makushṭa, wild mudga for āḍhaki, and kalāya for caṇaka. Cinaka of the Vishṇu Purāṇa is evidently a mistake. It is Cīnā in *vern.*, and the name indicates its foreign origin, not necessarily Cīna, China. It is the millet,—*Panicum miliaceum.* By Vrīhi was meant rice in general. From the lists of fourteen and seventeen dhānyas it appears that kalāya preceded āḍhaki, caṇaka and cīnaka. Kalāya though not one of the fourteen sacrificial dhānyas was considered "pure" in later times. This implies that if an exotic it was introduced at an early date.

(ii) Kauṭilya. (Bihar 400 B. C.)

Kauṭilya's *Arthas'āstra* as a source of information is valuable for two reasons. Its date and place are known, and it gives helpful details not found elsewhere. Its language is, however, archaic, and at places cryptic. But thanks to the labour of R. Shāmas'āstry much of the difficulty has been removed by his English translation. There is, however, much room for improvement in the indentification of natural objects and interpretation of technical processes. I follow the Sanskrit Text, 1st Edition.

Kauṭilya has a chapter on agriculture for the Royal Farm (II. 24). The account is highly interesting. But we shall content ourselves with noticing the food-crops. He directs the superintendent of the Farm to store in time seeds of all kinds of dhānya, of kitchen vegetable consisting of flower, fruit, root-stock and root, and of Pallikya, Kshumā (flax) and cotton.

He divides dhānyas into two classes,—dhānya, cereals, and kos'ī-dhānya, edible grains in pods.

For the purpose of agriculture, however, he classifies them into three classes according to the time of sowing seed. His three groups are:—

I. Seed to be sown before the regular rains,—(1) S'āli, (2) Vrīhi, (3) Kodrava, (4) Tila, (5) Priyangu, (6) Dāraka, (7) Varaka.

II. Seed to be sown in the rainy season:—(8) Mudga, (9) Māsha, (10) S'aimbya.

III. Seed to be sown after the rains:—(11) Kusumbha, (12) Masūra, (13) Kulattha, (14) Yava, (15) Godhūma, (16) Kalāya, (17) Atasī, (18) Sarshapa.

The difference between s'āli and vrīhi consists not only in their time of harvesting, but also in their qualities. According to Bhāvaprakās'a husked s'āli is white, husked vrīhi is not. The latter though sweet is less digestible than the former, and like the millets which are insipid consumed by the poor. Kauṭilya mentions Varaka which is evidently a millet. The name occurs in Caraka and Sus'ruta. The medical lexicon, Rājanighaṇṭu, describes it as a large priyangu. Probably it is Māruā of Bengal and Bihar, Māṇḍiā of Orissa, and Rāgi of Madras,—*Eleusine coracana.* The word, varaka could be easily changed into varuka and then into marua, māruā. It is essentially a food-crop of southern India. The name, Rāgi does not occur in ancient Sanskrit. It occurs in Rājanighaṇṭu, a work later than 1600 A. D., but not as a name of varaka. (10) S'aimbya was a field-crop like S'imbi,—*Dolichos lablab,* and its seed was used as a pulse. It was probably Rājamāsha of of Sanskrit, Lobia of Hindi and Barbaṭi of Bengali,— *Vigna catjang.* (11) Kusumbha, Bengali Kusum, the safflower,—*Carthamus tinctorius.* Oil was extracted from its seed, and a dye from its flower. (17) Atasī, Beng. tisī, also masinā,—*Linum usitatissimum* was the name restricted by Kauṭilya to the form which yielded linsced, while the name, Kshumā to that which yielded flax. The two forms differed in the colour of their flower (II. 12). (18) Sarshapa denoted to Kauṭilya S'veta sarshapa, the white seeded variety of *Brassica campestris.* It got the name Siddhārtha, 'that which fulfils desires', was considered "pure" and used in ceremonies and incantations. It was probably the first of the sarshapas cultivated in India, The red variety was also known (XIV. 1).

We find from the above account that two classes of rice, four kinds of millet, six kinds of pulse, four kinds of oilseed besides barley and wheat were under cultivation in Bihar in the 4th cent. B. C. There is, however, no mention of Āḍhaki, Caṇaka and Cīnaka. All the cereals were not considered of equal importance. Barley and wheat are included with other winter crops under the name, shaṇḍa, 'a group'. (The word was corrupted into Khaṇḍa, from which is derived Beng. Khanda). This indicates that they occupied small portions of the winter crops.

Pallikya which Kauṭilya took care to mention was probably Pālakya or Palakya of Rājanighaṇṭu, the pot-herb.—*Spinacia oleracea.* Cucurbitaceous vegetables used to be grown as garden crops on banks of rivers close to water. Pippali, the long pepper, long enjoyed the reputation of being the produce of Magadha. This and Mṛdvīkā, the grape-vine and sugar-cane were cultivated in fields which could be irrigated. Vegetables and root-crops were grown rear wells, pot-herbs on moist bed of dry lakes.

(iii). Amara-kos′a (U. P. 300 A. D.)

Amara-kos′a is the earliest extant Sanskrit dictionary and was compiled some centuries after Caraka. But as it contains a full list of cultivated foodgrains known up to the time of its compilation, which is 300 A. D. it serves as a definite land-mark in the present history. The list is given under Vais′ya-varga.

Amara notes the classification of dhānyas by Caraka, which is practically the same as that by Kauṭilya. It was, however, not possible in a dictionary to name the crops according to the classes. I arrange them here under three groups.

(1) Cereals,—S′āli, vrīhi, shashṭika, nīvāra, yava, godhūma, tokma, priyangu, aṇu, kodrava, gavethu.

(2) Pulses,—Māsha, mudga, masūra, kulattha, makushṭa, kalāya, khaṇḍika, caṇaka, āḍhaki, tuvara.

(3) Oil-seeds,—Sarshapa, s′vetasarshapa, rāji, tila, kusumbha, atasī, bhangā.

We find that dhānya and vrīhi have become synonymous and that vrīhi proper has got the name ās′u, the name current even now. It got the name, pāṭala, from the brown colour of the husked grain. Shashṭika is early Ās′u. Tokma is described as a variety of yava of green colour, and Bhāvaprakās′a adds, awnless. It was therefore oats, Hindi 'Jaui' which is harvested while green. The name as Tokman occurs in the Rigveda. Kalāya, the field-pea appears to have spread under two other names, Satinaka, and Hareṇu. Khaṇḍika is Khuṇṛe in Bengali and also Kheṇsāri in Bengali and Hindi,—*Lathyrus sativus*, owes its name to the bad reputation of causing paralysis of limbs. Chaṇaka, gram, got the name, Harimanthaka, which means *mantha*, 'food', of *hari*, 'horse'. It was used as horse-grain. The names, Aḍhaki and Tuvara have been misplaced in the Dictionary. Āḍhaki is the annual Aṛhar, and Tuvara, Beng. Tumur,—*Cajanus bicolor*, is the shrubby and almost perennial Aṛhar. It is, however, doubtful whether Tuvara here denoted the variety of Āḍhaki. From the place where the name Āḍhaki occurs it seems the pulse was first known in Surat. The name Kulattha occurs in its derivative sense as a mineral (chlorite).

It is difficult to say what the name Sarshapa denoted except in a general way. The vernacular names of crops vary in different parts of India. In the western, northern, and eastern parts the vernaculars are derived from Sanskrit, and the names are in each region more or less similar. Of these, however, Bengali approaches Sanskrit closely. Accordingly, *sarshapa* is the common *sarisā*,—*Brassica campestris* of which white *sarshapa* was regarded as a distinct variety. Rāji is *Rāi sarisā*,—*B. juncea*. It is described as dark, very pungent, inducing sneezing, and fit for Asuras, non-Aryans.

It was unknown to Kauṭilya, or he would have used it for the production of poisonous gases. Bhangā, Hindi and Bengali Bhāng,— *Cannabis sativa*, was known to Kauṭilya as a narcotic (IV. 1). It was cultivated for its fibre and also for its seed. In Vedic literature it was known as s′aṇa. In later times this name was restricted to the fibre-yeilding leguminous plant *Crotolaria juncea*. Kshīra-svāmī (1100 A. D.) in his commentary on Amara-kos′a says that Bhangā was also called S′aṇa; and Sarvānanda, a Bengali commentator (1200 A. D.) remarks that "Bhangā is well-known in Kashmir and that its seed is like that of the pea". The seed yields an oil and is sometimes eaten fried like the seed of Kusumbha.

(IV). Charaka (W. Punjab, 1000 B. C. to 100 A. D.)

Charaka was a title and a Charaka is believed to have been the court physician of Kanishka (120 A. D.). He revised the work left by Agnives′a who flourished many centuries before Buddha. The extant edition goes by the name of Charaka.

Charaka divides *dhānyas* into S′ūka-dhānya, awn-bearing, and S′ami-dhānya, *dhanya* in pods. The first class includes barley and other cereals, and the second class pulses and oil seeds. He divides the cereals according to their season of maturity and dietetic quality. The best is *s′āli*. The next are *shashṭika* and *s′ārada* (ripening in autumn) and the worst *vrīhi*. From this classification it is difficult to separate the millets by mere names. Some appear to have been the names of variations of the millets including *varaka* and *cinaka* we have already noted One is Jūrṇā, which has been mistaken for Junār or Janār,—*Zea Mays.* It is really Yavanāla of Bhāvaprakās'a, as we shall see later on.

There is mention of one kind of Yava and two kinds of Godhūma, Nāndimukhi and Madhuli but not the large-grained. There is the name, Yavaka, found also in Kauṭilya (XIV. 1). It denoted a kind of oats, and also wheat which was considered as an inferior kind of barley. Of the s'amidhānyas are mentioned the names, Mudga, Māsha, Rājamāsha, Kulattha, Makushṭa, Chaṇaka, Masūra, Kalāya, Hareṇu, Khaṇḍika, Tila, Āḍhaki.

Rājamāsha, also known as Mahāmāsha, 'the large māsha' is Barbaṭi and Rambhā of Bengali.—*Vigna catjang.* It is to be noted that Āḍhaki though considered superior to many pulses is mentioned last in the list. The same is the case with Jūrṇā. The last places in the list suggest later addition. *Tila* was eaten entire with other grains or as a paste. Oil was also extracted from it. There were other seeds known from which oil was obtained. But the mention of Tila only as a food-grain and not an oil-seed shows the antiquity of Charaka.

(V). Sus'ruta (U. P. 500 B. C. to 500 A. D.)

Sus'ruta represents the school of surgeons founded by Dhanvantarī. The extant work is a revised edition of Sus'ruta who flourished long before the Christian era. The medical Dictionary, Dhanvantarīya-nighaṇṭu, based on Sus'ruta was probably compiled about the beginning of the era. Sus'ruta divides food-grains first into two classes, *viz.* (1) Dhānya, and (2) Vaidala, and again Dhānya into two classes, *viz.* (1) Dhānya, and (2) Ku-dhānya, Dhānya inferior, e. g. the millets. The class Vaidala includes the S'ami-dhanyas of Charaka, and derives its name from the fact of the seed of this class consisting of two leaves, i. e. dicotyledonous. Sus'ruta enumerates fifteen kinds of kudhānya. But the name, Chīnaka does not occur. Priyangu is stated to be of four colours, black, red, yellow, and white. Wheat is regarded as a Ku-dhānya, of which the two varieties as named in Charaka are mentioned. Barley is also of two kinds, common, and Atiyava, large-grained. There is no mention of Jūrṇā. Ten kinds of pulses including wild forms are enumerated. There are two of lentil, one of gram, a nd two of pea, besides Hareṇu and Satinaka which resemble pea. There are Māsha and Rājamāsha. Khaṇḍika is named Tripuṭa, 'having three whorls in flowers', counting the large bracts as one. There are two others, named Sahā, commonly known as Mudgaparṇī and Māsha-parṇī, 'having leaves like those of Mudga and Māsha',— *Phaseolus aconitifolius* and *Tetramus debilis*, respectively. The name, sahā occurs in the Atharva Veda. Both Charaka and Sus'ruta were apparently unacquainted with Tuvara variety of Āḍhaki. Both of them, however, mention Ātmaguptā, 'which protects itself', the dreaded cow-itch,— *Mucuna pruriens*, as a kind of pulse. Of the oil-seeds Tila of course occupies the first place. Next come safflower, linseed, and white and brown Sarshapa.

Charaka has the same, but does not specify the two Sarshapas.

(VI). Bhāvaprakās'a (U. P. 1600 A. D.)

This is the latest authoritative text-book of medicine, primarily based on Charaka and Sus'ruta. The work does not belong to ancient India, but is valuable to us in two ways. It is systematic and briefly describes the food-grains. As a late production it shows considerable advance in the number of food-grains. Their names with explanatory notes are reproduced here under the classes adopted in the work.

(1) S'āli dhānya, rice grain white, ripening in winter.

(2) Vrīhi dhānya, rice-grain not white, ripening in the rainy season. Shashṭika is a class of Vrīhi, ripening while inside sheath.

(3) S'ūka-dhānya, awn-bearing, of which Yava is the type. There are five kinds of Yava, viz. the common Yava with sharp awn,—*Hordeum vulgare*; the awnless Yava—*H. vulgare, nudum*: Atiyava, very large,— *H. vulgare, hexastichon*; Tokma, large, green, and awnless—oats. The last is Svalpa-yava, inferior Yava. Godhūma is of three kinds, viz. Mahā-godhūma, large-grained and stated to have been introduced from western countries; Madhuli, small-grained, cultivated in the United Provinces; Nandīmukha, long and awnless.

(4) S'ami-dhānya, or Vaidala. Mudga of many kinds distinguishable by colour; Māsha, Rājamāsha or Mahāmāsha of three colours; Nishpāva; Makushṭa;

Masūra; Āḍhaki and Tuvari; Chaṇaka; Kalāya also called Vartula (round), Satina, and Hareṇu; Khaṇḍika also called Tripuṭa which causes paralysis of limbs; Kulattha; Tila, white, brown and black and small wild Tila, of which the black Tila is the best; Atasī; Sarshapa of three kinds, viz, Tuvari, (Ṭori in Hindi and sometimes in Bengali,—*Brassica napus*), the white and brown Sarshapa, and Rāji.

(5) Kudhānya, or Kshudra-dhānya, grass seeds. Priyangu of four colours; Chīnaka, a kind of Priyangu; S′yāmāka; Kodrava; Uddāla or wild Kodrava; Chāruka, the seed of the S′ara reed,—*Saccharum sara*; Vams′a-yava, the seed of bamboo; Kusumbha; Gavethu; Nīvāra; Yavanāla. The last named Dhānya has many names given in Dhanvantarīya-nighaṇṭu, such as Jūrṇā, Yāvanāla, Yonāḷa, Devadhānya &c., and is thus described: It has a long stem and leaves and resembles the sugarcane. The grains are yellowish and round. A variety has red grains. Some mature in autumn, others in winter. Bh. P. knew only the red variety. This great millet,—*Sorghum vulgare* is called Deva-dhānya or De-dhān in Bengal and Oṛissā, and Juār or Juvār in northern India. It received the name, Deva-dhānya, 'dhānya of gods' on account of its large size and resemblance with the sugarcane. Amara was silent about it, though Charaka had it. Hemacandra, a Deccan lexicographer (1200 A. D.) has given all the names. The names Jūrṇa, Yonala do not convey any meaning. Nor is the name Yavanāla or Yāvanala, 'having stem

like that of barley', appropriate. These names especially Yonāla, suggest connection with the Yavanas, the Greeks. Probably the millet became known through them.

Mahā-godhūma was admittedly introduced by the western people. So was Tuvara Sarshapa. It also appears from the above list that Kusumbha was gradually losing its importance, and that Nīvāra and some of the millets of old were not much esteemed.

(To be continued.)

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II. AHIVATA-ROGA.

By Prof. Kalipada Mitra, M. A., B. L.

There is a frequent reference to a disease in Pāli literature from Vinaya texts down to the Commentaries on the Pāli *Vatthus* known as the *ahivāta-rōga*, the exact nature of which is uncertain. It seems that the disease was a fatal one and broke out in an epidemic form. Literally, it was the "snake-wind disease". It may mean either that it was as fatal as the breath of the snake (*nāsika-vāta* mentioned in the Jātakas) or that it was caused by it. The translator of the Jātakas (*Cambridge Translation*, Vol. II p. 55) is equally uncertain and hazards the opinion that it might be malaria, or it might be cholera. I caused enquiries to be made about it amongst the renowned Kavirājes at Benāres and Monghyr without any success. The Pāli Text Society's Dictionary gives no better account of it than that "it is the name of a certain disease, 'snake-wind-sickness'".

Let me give a few references to it in literature with a view to get an idea about its character.

In Jātaka no. 474 *(Amba-jātaka)* we read...... "*tassa purohitakulam ahivātakarogena vinassi. Eko va putta bhittim bhinditvā palāto*". Translation—The whole family of his *purohita* died of *Ahivāta-roga*. His only son fled *through an opening made in the wall*".

In the *Ācāmadāyikavimāna* of the Vimānavatthu-atthakathā (*V. V. A.* II. 3) we read that all died excepting a woman who in fear deserted the house and made her escape *through a hole made in the wall*, leaving everything behind her *(sā geham gehajanañca sabbam dhanadhaññam chaḍḍetevā maraṇabhayabhīthā bhittichiddena palātā)*.

"There are also those who say that he (Kotuhalaka) left his home because the people were dying of intestinal disease", (*HOS.* 28: p. 252, Dh A. i. 167).

"After a time intestinal disease broke out in the house of the treasurer, Bhaddavatiya. When this disease breaks out, the first to die are flies, afterwards in regular order, insects, mice, domestic fowls, swine, cattle, slaves both male and female, and last of all the members of the household. Only those that break down the wall and flee, save their lives". [1]

"Once upon a time the plague broke out at Rajagaha in the house of the principal treasurer of Rajagaha. When the plague breaks out animals from flies to cattle are the first to die; after them the master and mistress of the household. So this disease attacked last of all the treasurer and his wife".

In the *Gaṅgarohaṇavatthu* (Dhammapada Commentary, *Pakiṇṇakavaggo*, *Dh A*, iii, 437) we get a description of this disease following upon famine, leaving us in no doubt as to its pestilental character.

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[1] HOS. 28, p. 266; Dh A, I. 187.

The description is of the famous city of Vesali which was, at one time, rich, prosperous and abounding in population *(iddhā ahosi, phītā, bahujanā, ākiṇṇamanussā)*. But evil days overtook her. At another time there was a famine due to failure of crops; at first the poor people died of starvation (*Chātakdosena*); then attracted by the terrible stench emanating from the petrifying corpses of the wretches left about here and there the evil spirits (*lit.*, non-human beings, *amanussupaddabena*) made ravages from which men died; lastly from the said putrefying effluvia broke out the *ahivātaka-rōga.* [2] Thus these three troubles (plague of famine, plague of evil spirits, plague of disease) arose. The citizens came to the king and said, "Mahārāja, here in this city there are now three causes of fear; seven *Rājās* have preceded you, all dutiful and righteous and there was no such trouble before. Then the Rājā caused an assembly to be held in the Santhāgāra (Council Hall) and adjured them: "Please consider, find out if there be any unrighteousness in me". After deliberation the assembly declared "There is no guilt (sin) in you—*Mahāraja, natthi doso*". Then they cast about as to how they should be delivered from the terrible plague. Some advocated the offering of sacrifice *(balikamma)*, some the saying of prayers, and others the holding of public festivals *(āyācanāya etc.)* and auspicious rites, but every device failed.

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[2] Burlingame translates it as 'intestinal disease'. See *HOS*: 30, p. 168.

Ultimately according to the advice of the Satthā (Master), Ānanda learnt the *Ratansūttam* from him, and then taking water in the stone bowl of the Lord, stood at the gate of the city, meditated on the virtues of the Buddha, entered the city and, for three days and nights, went about within the three walls of the city, doing *Paritta.* Then even as he uttered the first two syllables of the *Sūtta,* "*yam kiñci*......", the consecrated water thrown up fell upon the *amanussā* (non-human-beings), and as the water fell like silver drops upon the sick people, he rose, free from the malady, and surrounded the Thera. As the spray of the consecrated water touched the *amanussā* sheltering in the *alāta* (heaps of sweepings of firebrand), *samkarā*— (sweepings, पांशकुड़), *kuṭa* (heap), and *bhitti* (foundation), they fled through the various doors near them, and there were a thousand doors, but [so thick were they] not gaining an entrance through them, they split *open the walls* and thus fled.

Dr. O. Pertold, Ph. D., wrote a very interesting article on the *Paritta* in the *Journal of the Anthropological Society of Bombay,* Vol. XII. The Pāli word, *parittam,* corresponds to Sansk. *paritrāṇam* meaning 'protection' in the ordinary sense. Subsequently it acquired the technical meaning of protection and protective ceremony against devils and evil spirits by means of charms and incantations. In the Cullavagga, *paritta* is used as an effective charm against snake bites. King Sena II of Ceylon ordered *Ratana suttam* to be engraved on golden leaves and, in order to arrest plague, an image of Ānanda was caused to be carried through the city and the *Paritta* recited. We have seen above how Ānanada by means of the *Ratanasuttam* saved Vais'āli from the evil spirits who were supposed to have caused the plague. In fact the manner of exorcising evil spirits who were supposed to cause diseases, plagues and epidemics by means of charms, spells and incantations was as old as the Atharvaveda, and the practice must have been in full vigour in pre-Buddhistic times and was accepted by the Buddhists subsequently. From the Vinaya texts we find that the Buddha tolerated many popular superstitions. The Mora-paritta was most probably a pre-Buddhist *mantra*. Canonical texts were used as *Parittas* such as the *Ratanu-sutta*, *Khaṇḍaparitta*, *Mora-paritta*, *Āṭānaṭiya Aṅgulimālā paritta*, etc. The practice came down to later times, and is the *Pirit* of the Sinhalese, *Pe-yik* of the Burmese and Siamese and so forth. Protective practices against Yaksas, demons and evil spirits in general are now used by witch-doctors and magicians. In various forms they continue to be used against evil spirits, plagues, epidemics, etc. There were numerous charms, spells, incantations, invocations, *Dhāranīs* etc, resorted to by the followers of the Vajrayāna cult. I quote an instance from the *Sādhanamālā*. Ārya-Parṇas'avarī could protect people from all evils.

Yānikānicit bhayānyutpadyante yāh kās' cit māryyo yāh kās'cit mahāmāryyo yāh kās'cidītayo *ye kecidupadravā ye kecidapāyā ye kecidadhyātmikā bhayā ye Keciduposargā upasarga sambaddhā vā utpadyante sarvāni tāhi sarvvāstāh sarvve te bālata evotpadyante na paṇḍitatah. Tadanena satyena satyavacanena satyavākyena jjah jjah jjah ebhih paṇḍitadhisṭhitairmmantra padairmmama sarvasattvānām ca raksām kuru, paritrānam kuru, paripālaanam kuru, s'āntim kuru, svastyayanam kuru, daṇḍaparihāram kuru, sāstraparihārm kuru, yavadvisa dūsanam kuru, agniparitaram kuru, udakaparihāram kuru, kārkhorddacchedanam kuru, Sīmābandham kuru, dharaṇībandham kuru, Tadyathā, amṛte amṛtodbhave amṛtasambhave ās'vaste ās'vastuṅge mā mara mā mara mā sara mā sara s'ama pras'ama upas'ama sarvvavrādhīnupas'ama sarvvākālamṛtyunupas'ama...*"

As the cult spread outside India the *mantras* and Dhāraṇis became propagated. We find in the *Manuscript Remains of Buddhist Literature in Eastern Turkistan* (edited by Dr. A. T. Rudolf Hoernle) some examples of the Dhāraṇīs.

We know of the famous *jalpaḍā* in Bengal used for all purposes from counteracting the effects of the evil eye supposed to affect children thus causing their indigestion, emaciation etc., to the curing of poison (e. g. poisons of snakes) and exorcising of evil spirits. Every one knows of the *S'ānti-jala*, and *svastyayana*.

There is a widespread belief that epidemics are caused by evil spirits of every description, *yaksas*, demons, *yoginīs*, *dākinis* etc. In order to avoid them, therefore, they should be appeased and flattered. Thus the Evil Spirits are addressed as deities and worshipped as such. Their good services are requisitioned by making them tutelary or guardian deities. This process is ever going on. I have already quoted the Ārya-Parṇas'avarī-Tārā-Dhāranī, which is a protective charm against all evil including diseases and epidemics. Now Parṇa-S'avarī who was a goddess of the S'avaras was indeed a Pis'āchī, and she is hailed as such "*om pis'ācī, Parṇas'avari hrih hah hum phaṭ pis'aci sxāhā*", or, "*om pis'aāchl Parṇas'avari sarvvamāri-prasamani hum phaṭ svāhā*". It is evident that she could do harm, but she is worshipped as a deity; and a baneful deity is converted into a protectress. Let us take another example, viz., that of Hārīti. She used at one time to eat children. A legend about her is given by It-Sing,[3] the Chinese pilgrim, who visited India in the seventh century. "In every monastery" replied the Buddha, where Bhiksus dwell, the family shall partake of sufficient food offered by them every day".[4] For this reason the image of Hārīti is found either in the porch or in a corner of the dining hall of all Indian monasteries, depicting her as holding a babe in her arms, and round her knees three or five children. In the *Sādhanamālā* she is addressed as a Mahā Yaksinī: "*om Hārıtyai mahā-Yaksiṇaih hara hara sarvvapāpāni me ksīm sarvayaksiṇi*

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[3] See Takakusu— I'. Tsing: *Records of the Buddhisl Religion,* p. 37.

[4] 'At the lower end of the row an offering of food is made to the mother, Hariti.'—Rhys Davids, *Buddhism*, p. 73.

praves'ani svāhā" So if originally she was a Yakṣiṇī and an evil spirit, she subsequently became a benevolent mother-deity, and in the sculptured representations we find her encircled by playful children, some of whom sit on her lap. She became the goddess of fertility, and the queen of Kuvera. Many of her images are found in Gandhāra. There is a Hārīti group in the British Museum. [5] There are also sculptured representations of her in the Mathura Museum. [6]

In Ōṛissā many such spirits are worshipped as deities and have acquired the name of Ṭhākurāṇī. We read; "The Ṭhākurāṇī receives special attention on the outbreak of epidemic disease. She is supposed to possess more powers for doing or averting mischief than for doing positive good. Within her own village, she is believed not to commit any mischief. Epidemics are supposed to be the work of neighbouring goddesses, whom the tutelary village goddess expels by persuasion or superior force, if duly propitiated. The occurrence of a single case of Cholera in the village is the signal for *Ṭhākurāṇī mārjaṇā* or washing of the Ṭhākurāṇī'. [7] The names of some Ṭhākurāṇīs indicate their origin and character—e. g. Andharuni (dark) Ṭhākurāṇī, Aṅgakhāi (body-devouring) Ṭhakurāṇī, Asurāṇī (demoniacal) Ṭhākuraṇī etc. Others bear the names of Kālī or the Vajrayāna deities—Vajra-Mahākālī, Bhagavatī, Chāmuṇḍi etc.

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[5] Cf. *Journal of India Art*, Vol. VIII no. 62; pl. IV fig. 2.

[6] *Catalogue of the Archaeological Musuem at Mathura* by Dr. J. Ph. Vogel.

[7] See *J. A. S. B.* Vol. LXXII (1903), Pt. III no. 2 p. 83.

Magical rites are also observed to prevent disease-spirits from crossing the village boundary and entering the village. The tutelary goddess is often supplicated to do this, e. g. Parṇas'avarī is requested to protect the boundary, *Sīmābandham kuru.* Exorcisers of evil spirits also "bind the village" against incursion or inroad of evil spirits. The Āngāmi Nagas use *panjies* to prevent evil spirits from entering their village, and causing infectious diseases. "Panjies are used freely, being put up in a slit bamboo so as to point in all directions (the instrument is called *kethi-thedi*), and also being stuck in singly over the door. Similar but much more elaborate terrifying gargoyles are used by some of the Konyak tribes to frighten away the Cholera spirit". [8]

The clue to the question as to why in the event of the *ahivātaroga* breaking out, people avoid the front door and escape by a hole cut in the wall seems to be supplied by the following account:

"The Angamis, by the way, conceive of the spirit of small pox as sowing the disease, as it were seeds, over all entering in at the village gate. Accordingly when a village is visited by the small-pox the inhabitants *give up using the gate and go in and out some other way, climbing over the wall or ditch or through the junle*". [9]

It seems that it is believed that the disease spirit knows the main door or the main gate; and if any one issues by that passage the spirit is sure to attack him. If, on the other hand, one escapes unnoticed, he is free from the spirit's attack. That is, one has to trick the disease-spirit or deceive him. It is natural for the spirit to expect that people must use the main thoroughfare ordinarily used and he can then attack his victim and he is so secure in that idea that he cannot conceive that people could use extraordinary and unthought-of passages to effect an escape. The main point is to take steps *not to be seen by him.* It is believed also by savage people that a spirit easily recognises the main door, but fails to recognise an unusual passage improvised for an emergent occasion, so that even if he is so minded he cannot return by it.

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[8] J. H. Hutton—*The Angami Nagas*, p. 98.

[9] The Italics are mine.

Therefore we think that there are two allied but distinct ideas which seem to explain the use of an extraordinary passage, i. e., cutting a hole in the wall as a means of escape:—(1) The disease spirit is quite confident of attacking persons using the main door or the main gate where he keeps a lurking watch, for he believes that this is the only passage for egress and ingress that must be used by persons. To escape him some other extraordinary passage is devised, e. g., cutting the wall of the room, or escaping through the roof, or climbing over the village wall, and so forth.

There are certain occasions when people become especially susceptible to the attacks of spirits, e. g., in the case of a woman during pregnancy and child-birth, and proper precautions are therefore taken during this period. The Angamis believe that the spirit lies in wait at the front door. Therefore, when the five days have expired (after child-birth), the mother is allowed to go out, but *by the back door of the house only, and if there is no back door, one has to be made for the purpose.* No one must see her going out, she goes out by the stealth, and taking all the cooking, eating and drinking utensils of the household with her, and when no one is looking she throws them behind the house".

Probably there may also be the lurking idea that if there be any connection whatsoever between any evil spirit and the articles during the unclean period, by throwing them away the spirit is decoyed out of the house with the utensils, and he may not come back.

(2) The spirit of one just dead must not be conducted out of the house by the main door, which he recognises and may return through it (so the corpse is not taken out by the main door). Therefore a passage is invented, too ingenious for the poor wits of the spirit,—a hole in the wall, which the spirit would not conceive, by any stretch of imagination, to be a possible thoroughfare for persons. We read: "If a woman die in childbirth or before the completion of the five days' *genna*, she is taken out *not by the door but through a hole made in the side of the house,* and buried with all her property".

I am informed that amongst the Garhjāt chiefs of Ōṛissā the corpse of the Rājā is taken out—

(1) through the main gate, the *siṁha-dvāra*, or the Lion-gate, as it is called, or

(2) *through the back door*, or

(3) *through an opening made in the wall.*

After the death of the Rājā, the Yuva-rāj, (heir-apparent) is formally installed on the *guddee*, and then he orders the removal of the corpse for funeral obsequies.

The Chiefs claim to be of Rājput descent and their ancestors are said to have come to Ōṛissā in medieval times and founded families. But, at any rate, they have adopted some of the customs of the savage people amongst whom they lived, in the matter of taking out of the corpse.

Dr. Elmore says that some classes of the Lambadi people make a hole in the wall or roof of the house through which the dead body is taken out. This opening is then closed up so that the ghost may not be able to return.[10]

There are many practices resorted to by people to prevent the return of the ghosts of the dead which need not be detailed here.

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[10] W. T. Elmore—*Dravidian Gods in Modern Hinduism* (1925), p. 154.

ANTHROPOLOGICAL NOTES AND NEWS.

The Seventh session of the All-India Oriental Conference was held at Baroda on the 27th, 28th and 29th of December. The Editor of this Journal was elected President of the section and in his Presidential Address discussed the origins of the Indian Caste System. The address will be published in a future of this Journal. Abstracts of some of the other papers read are given below:

1. *Some interesting forms of divination.*—By Firoze Cowsji Davar, M. A., LL. B.—Divination is either unconscious, for instance, when a person takes augury from a book carelessly left open, or conscious when a person deliberately practises divination to ascertain what he considers the will of God.

Conscious divination is practised by the Jews in their "Bath-col" or "daughter of a voice," when a person aiming at practising divination hears certain words and applies them to his own circumstances. An illustration is quoted from the Talmud. Another instance quoted is that of Alexander the Great, which is partly an oracle and partly a Bath-col.

Inspired or possessed persons can give out revelations; so too can children because of their extreme innocence; so also can madmen or idiots, their very mental derangement being a good qualification in this direction. Intelligent persons, by reason of their very inteligence, are of no use in this.

Birds by their flight or movements unconsciously reveal certain facts to human beings while the former are of course blissfully ignorant of it. Through divination fate can perhaps be fore-seen, not forestalled.

Divination is also practised from great and popular books like Virgil's 'Æneid'. Virgil dominates the mind of the Middle Ages for various reasons. He is also transformed into a magician and various miracles are attributed to him. The masterpiece of such a man may be supposed to be a proper aid or medium for practising divination with. The *Sortes Biblicæ* is denounced by both the Old and New Testements, and yet the Bible is freely used for divination purposes. Divination is condemned by religion because it makes us unmanly and diffident, and also because any villain, through it, may get what he considers to be the sanction of the 'divine will' to his nefarious act. Most religious works are used for divination purposes. An instance of the Buddhists is quoted. The Christians also practise the "Sortes per Brevia" and "Sortes Apostolorum." The historical instance of Dr. Dodderidge practising the Sortes Biblicæ is quoted from De Quincey. Another instance of divination from the Bible is quoted from Tennyson's "Enoch Arden". The dangers of misinterpreting divination are set forth.

The Muslim method of consulting the Qoran for divination purposes is explained at length. The Muslims also divine with the help of a rosary. Another favourite method of divinationin the

Muslim word is by consulting the Diwan of Hafiz, the great Persian poet, unrivalled for lyrical charm and named the "tongue of the invisible."

Another mode of divination is cycliomancy or judging the future by looking into cups. Only children or the pure-minded can get reliable answers.

Certain other forms of divination are rather summarily dismissed. Ophiomancy or divination from snakes is explained with the help of a work on the subject written by the late Dr. Sir Jivanji J. Modi. Another instance in point is quoted from Cicero's work on Divination. The elephant was once believed to elevate any random man to the throne by raising him with its trunk on its head.

The bees are belived to fore-shadow future events by their movements. Instances of Plato and St. Ambrose are quoted in support of the statement. The instance of the tyrant Dionysius is also quoted on the subject from Cicero's work on Divination.

Hippomancy is the judging of future events from the sound of horses. The well-known instance of Darius Hystaspes is quoted from the History of Herodotus.

The movements of birds were a favourite means of fortelling the future, especially among the Vedic Hindus and the Romans, as seen from the Gujrati word "Shukan" and the English word "augury".

The bones and especially the entrails of sacrificed animals were used for divination purposes. An instance is quoted of a Japanese custom in support of the statement. This custom was largely in vogue amongst the Greeks and Romans.

Divination is an inexhaustible subject and can be as wide as the selfish, superstitious and tremulous nature of man can make it. It is fast losing its efficacy in this scientific age, but it dies hard, for it is still secretly practised by persons who denounce it in public. Divination has a charm of its own as well as an academic value for scholars who are ever anxious to collect such curiosities from the nooks and corners of world-civilization.

2. *The Sugalis.* By Prof. R. Subba Rao, M.A., L. T., F. A. U.—The Sugalis live in the Godavary Agency, Nallamali Hills, and the Hilly regions of Kadapah and Anantapur Districts.

THEIR LANGUAGE AND HABITS:—Their language is called Lombadi. They are thrifty and somewhat civilised. They are nomadic and have thieving propensities.

THEIR ORIGIN:—They claim descent from Vali and Sugriva of Epic fame.

COLOUR AND DRESS:—Unlike the other aboriginal tribes of the coastal Agency and Nalamali hills, they are fair-complexioned, and good-looking. The women wear very gaudy dress, their underwear consisting of a *lunga.* The men wear a loin-cloth and a head-dress. The women wear metal and ivory ornaments. Copper and brass shin-rings are also worn. They decorate their noses and fore-arms with tattooing.

OCCUPATION ·—The men are engaged in cultivation and cattle-breeding. The women engage themselves in selling forest produce.

THEIR DWELLINGS :—Their settlement or *Thanda* consists of a number of huts of thatched roofs.

MARRIAGE AND DEATH CUSTOMS :—The marriage ceremonies are held for three days during which period they indulge in feasts, dances and drinking *Bhung*. There is bride-price consisting of cattle and ornaments. The bride-groom ties *tali* round the neck of the bride. Widows are allowed to remarry. Polygamy prevails. Divorce is permitted. The Sugalis burn the dead people if they happen to be married and bury others. No elaborate funeral ceremonies are practised.

RELIGION :—The Sugalis or the Lambadis worship *Krishna* and so belong to the cult of Vishnu. They also worship *Vana S'aṅkari* or the Forest Goddess on whom they depend for their prosperous life in the forest. They also worship *Bāsava* or Nandi (bull) as *Krishna* the cowherd is their God.

3. *South India in the Rāmāyaṇa.* By V. R. Ramachandra Dikshitar, M. A.— An attempt is made in this paper to study the *Rāmāyaṇa* as a source-book for the traditional history of India, from the South Indian stand-point. Before he proceeds to examine the historical data furnished by the epic regarding the Dekkan and South India, the author deals briefly with the topography of India, south of the Vindhyas. All India south of Prayāga (Allahabad) was

one extensive forest, though the region between Prayāga and S'riṅgaveripura was yet a clearing in the forest. Beyond was all jungle with aboriginal tribes. Side by side were the hermitages of the Āryan sages who were disturbed often in their peaceful avocations by the Rāksasas. In his expedition to Laṅkā, Rāma visited the important hermitages and paid respects to the sages like Bharadvāja, Vālmīki, Atri, S'arabhaṅga, Agastya, and Sutīksṇa, and crossing the *Yamunā* he reached Chitrakūṭa from which began the famous Daṇḍaka forest comprising the region between the modern Bundelkhund and the river Kṛisṇā. He spent ten years near the Pañchāpsaras lake, visited Pañcavaṭi (Nāsik) and crossed the *Godāvarī*. At Janasthāna, the first inhabited country, he vanquished and slew a good number of the Rāksasas in the battle. He then went to Risyamūka and allied himself with Sugrīva and Hanumān. Killing Vāli he enthroned Sugrīva who followed him to Laṅkā or Ceylon with his hosts. The attempt to fix the location of Laṅkā near the Vindhya valley or the Central Provinces is untenable and unconvincing. The mention of the Vindhyas by Vālmīki is an error for the Sahya hills. It is absurd to say that the search party to the south went to the Vindhyas in the north. The stanzas 8-12 of Chap. 41 of *Kiskindhyākāṇḍa* are interpolations. The identification of Laṅkā in any other part of India would not carry conviction. The Malaya hills are the Travancore hills and the Velāvana possibly refers to Valavanāḍ in the east of Tinnevelly. Tht Dardura is a reference to the Nilgiris with the highest peak Dodabetta. The route to Laṅkā from Pañchavaṭi lay through the tableland of Mysore.

The people of Draviḍa were Draviḍians. The primitive Dravidians consisted of a number of tribes—the Rāksasas, the Yaksas, the Vānaras and the Nāgas. The Pāṇḍyan kingdom can be traced back to the age of Raghu and Rāvaṇa. These tribes had frequent intercourse with Aryāvarta in the north and other foreign countries by sea. The Rāksasas were the descendants of the indigenous tribes—Vallavar and Minavar and perhaps were the ancestors of modern Australian aborigines. The existence of Brahma-rāksasas shows that this tribe gradually adopted Brāhmaṇism. They indulged in magic and witchcraft, especially in wars. Rāvaṇa, their great king, was learned in the Vedas. The Rāksasas had fortresses and temples and parks besides a well-organised polity. The Yaksas were dispossessed by the Rāksasas in Ceylon. But after their decline the Yaksas again rose and continued to be in power until they were conquered by Vijaya in the 5th century B. C. The Nāgas had for their totem the serpent. They lived on the seacoast of India and Ceylon. They were a seafaring tribe and their womenfolk were renowned for their beauty.

The next tribe that claims our aatention is that of the Vānaras. Their kingdom was Kiskindhyā. They had been brought under Āryan influence by

Raghu and his son Daṇḍaka, after whom became famous the Daṇḍakāraṇyam. Hence Rāma claimed that territory as belonging to the empire of Ayodhyā. The Vānaras were a forest tribe. Hanumān was an expert grammarian. The Vānaras were sun-worshippers and were a ferocious community more akin to Negritos. They were monkey-like in appearance and learnt and spoke in Samskrit. They were vegetarians and lived chiefly on roots and fuits. Their chief weapons were clubs and stones. They had their own polity, army and council. They could boast of an expert engineer like Nīla. It is said that the wandering Lambaḍis in the Bellary district claim Vāli and Sugrīva as their ancestors. Thus it is interesting that the primitive Draviḍians had attained a fairly high degree of civilisation and culture.

4. *Marriage and Marriage customs of the Ancient Tamils.* By Pandit N. Chengalvarayan.—

1. The Sangam epoch and the Sangam Literature—first or second century of the Christian era.

2. Sangam Works-Tholkáppiam-Pattupāttu, Ettutokāi, and Padhinenk'izhkanakku, etc.,

3. *Aham* and *Puram*:—The two main divisions, of Tamil Literature: Aham (subjective, meaning Love); Puram (objective, meaning War). By Aham is meant "the joy and experience of a married couple born out of harmony at home". It deals with the emotion of love, the characteristics of lovers, of messages between them, of their union, their separation, the conjugal and domestic life and so on. In other words, Aham and Puram mean erotic and heroic poetry respectively.

4. Love and marriage,—grouped under three heads.
5. The two real forms of marriage.
   (a) The secret Marriage i. e., pre-nuptial love.
   (b) Marriage in the open, i. e., post-nuptial love. Compare the Āryan form of the Gandharva marriage.
6. The change of marriage ties after the Sangam period.
7. Ancient marriage customs.
8. Conclusion.

5. *Home of Tantricism.* By Prof. Nagendra Narayan Choudhary, M. A.— Tantricism did not grow on the soil of India. The introduction of the worship of S′akti and of other similar rites in Tantricism which are so un-Indian that it cannot but be admitted as an external or foreign influence.

As regards the fountain-head from which Tantricism first originated, according to Indian tradition, Tāntricism derives its main teaching from the S′ruti. But, really speaking, it has no connection with the ancient religion of the Hindus. There are many rites in Tantricism which are diametrically opposite to the Vedic ones. The statement, that Tantricism owes its origin to the S′ruti, has also been nullified by the accounts of the S′rīmadbhāgavata and the Padmapurāṇa where the followers of Tantricism are called pāsaṇḍas which is a term of contempt.

Tantricism has its origin in the Bon religion of Tibet. Tusita, from which Asaṅga first introduced Tantricism to India, has been identified with the mountain Ti-rtse or Ti-se in Tibet and is identical with the Kailāsa mountain. The Bon religion of Tibet was, at one time, very prevalent in the Kailāsa mountain. We know that S'iva promulgated his teaching in Tāntricism from the *Kailāsa* mountain. Now it is quite clear that the home of the Bon religion is the home of Tāntricism, which is the Kailāsa mountain and is still an object of pilgrimage both to the Bon people and to the followers of Tāntricism.

Vas'istha went to Mahāchīna where he attained *siddhi* (perfection) with the help of Mantras and the free use of the five 'Makāras'. The country of Mahācina has been identified with Eastern and South-eastern Tibet.

Pūrṇagiri, Uḍḍiyāna, Sirihaṭṭa and Kāmākhyā are four sacred places of Tāntricism. Uḍḍiyāna, Sirihaṭṭa and Kāmākhyā have been identified. Pūrṇagiri has not yet been identified. Different scholars hold different opinions regarding its identification. But in this paper *Pūrṇagiri* has been identified with the help of a Tibetan work, called the Kālachakrajñānapariccheda (dus-hkhor-gyi-yeses-kyi-lehu.). It is on the north of Udyāna (Uḍḍiyāna).

Tāntricism has been defined. It mainly deals with Magic which is also the special feature of the Bon religion and is supported by the Tibetan text.

Gods and Goddesses of the Tāntric pantheon, such as, S'iva, Umā, Durgā, Kālī, Ḍākinī, Ambikā, Khaṇḍarohā etc. are of external origin and identical with those of the Bon pantheon.

Tāntricism, has kept intact a system of religious practice which has come down to us as the offshoot of a very ancient religion which is quite un-Indian. The author tries to show in this paper that the form of worship incorporated in Tāntricism has its origin in the Bon religion of Tibet. The organic kinship between the Bon religion and Tāntricism has been sought to be established on the evidence of a number of the deities of the Bon religion whose worship forms an important function of Tāntricism. So far as the mystic teaching is concerned, Tāntricism runs parallel to that of the Bon religion. Magic, fetishism, demon-worship and propitiation by means of incantations are features which go to show the affiliation and adjustment of Tāntricism to the Bon religion of Tibet.

6. *The Human Body according to the Garbhopanisad.*—By Dr. Ekendranath Ghosh, M. D.—*Garbhopanised*, belonging to the Tāittirīya school, and attributed to the sage Pippalāda, contains short notes on the anatomy and physiology of th human body, together with descriptions of the developing embryo at different stages till full term. The author propounds theories on the determination of sex, formation of twins and on maldevelopments, and in addition, philosophical ideas on rebirths and recollection of past events in former births. The anatomical, physiological and embryological considerations here dealt with show the accuracy

of observation and soundness of views in many points of the Vedic sage at such a remote period.

7. *Distribution of Wealth in Ancient India.* By N. G. Kalelkar, B. A. (Hons.)— Ancient India enjoyed general prosperity and happiness. This was due to the fact that most of her institutions, social as well as religious, were based on the economic principle of distribution of wealth. This arrangement made accumulation of wealth impossible. The following institutions helped this process.

I. Institution of Sacrifice.
   (a) Sacrifices compulsory for people capable of performfng them.
   (b) Distribution of daksiṇā, an essential part of sacrifice.
   (c) Other classes, such as merchants, labouress, etc. also benefitted.

II. Institution of Religious Rites, S'rāddhas, etc.
   (a) Feeding caste-members at marriage ceremonies, etc.
   (b) Performing the annual and other s'rāddhas etc.

III. Institution of Tīrthas.
   (a) Purifying power of the *tirthas.*
   (b) *Tirthagamana* for *prāyas'citta.*
   (c) *Tirthas* responsible for feeding beggars, etc.

IV. Institution of Caste.
   (a) Choice of occupation dependent upon birth.
   (b) Training received directly from father.
   (c) Son had not to invest any capital in the business.

- (d) Higher castes forbidden to follow low profession or compete with lower castes.

V. Institution of Ās′ramas.

- (a) People of advanced age required to be *vānaprasthas.*
- (b) *Vānaprasthas* no longer a burden to society.
- (c) Free scope for younger generation to come forward.

VI. Village Communities.

- (a) Corporate responsibility of vallagers.
- (b) Maintenance of guests, royal officers, public buildings etc., from the village fund.
- (c) Contribution to village fund compulsory on various occasions.

8. *Gotra and Pravara in Vedic Literature* By P. V. Kane, M. A., LL. M.— The result of the paper may be summarised thus. The word *gotra* is used in the Rigveda in the sense of 'cow-stall' or 'herd of cows' and sometimes in the sense of a 'cloud' or 'mountain' and possibly in the sense of 'a group or assemblage of persons'. The descendants of great sages like Vasiṣṭha had came to be called collectively by the plural of the word denoting the ancestor. In the *Taittiriya amhitā* persons descended from a common ancestor appear to be grouped separately where it is said that the *hoṭar* must be a Bhārgava or that the Brahmā must be a Vās′iṣṭha, that in the Atharvaveda and Maitrāyaṇi Samhitā, the word *gotra* appears to be used In the modern sense. In the Tāṇḍya and other Brāhmaṇas words like *Sagotra* occur in the modern sense and several prominent *gaṇas* like the Bhrigus

and Āṅgirasas with their divisions and subdivisions are specifically referred to. For example, the Aitas'āyanas are referred to as a section of the Bhrigus, Kāpileyas and Bābhravas as subsections of Vis'vāmitragaṇa. In the Upanisads before a Brahmachāri was accepted as a pupil he was asked his *gotra*. The question whether the *gotra* system had so far been extended as to apply to marriages cannot be answered with as much confidence as could have been wished. The Vedic literature of the Saṁhitās and Brāhmaṇas being concerned with the solemn S'rauta sacrifices had no occasion to refer to the prohibition of marriage in the same *gotra*. But when texts are so particular as to lay down that a man should stay with his *svagotra* after performing Vis'vajit, it appears to be a natural extension of the same feeling that he should be called upon to choose a wife from another group. The prohibition of *Svagotra* marriage in the Sūtra age was absolute and such a rule must have grown up only in the course of centuries. Therefore we shall not be far wrong if we suppose that during the Brāhmaṇa period at least, restrictions as to *gotra* in marriage were prevalent.

The original meaning of the word *pravara* is 'choice' or 'invocation of Agni' and then it came to mean one or more illustrious *Risi* ancestors of a man who had in former ages invoked fire to carry their offerings to gods. *Pravara*, according to the Sūtras, entered into sacrifices and was also closely connected with domestic matters, such as marriage, *upanayana, caula.* *Ārseya* is a synonymn of *pravara*, and occurs even in the Rig Veda in the sense of 'status of a *Risi*, or sprung from or descendant of a *Risi*'. In the Rig Veda, Agni is frequently invoked by a sacrificer who says that he does so in the same way as great sages like Jāmadagni, Aurva, Bhrigu or Apnavāna did. In the Rik itself names of *pravaras* such as Parās'ara and Vas'isṭha occur. In the Atharva Veda and the Vājasaneya Samhitā *ārseya* is used in the sense of 'one sprung from a famous sage'. In the Taittereya Samhita *ārseya* and *pravara* are used in the same sense in which the Sūtras employ them. The same sense occurs in the Tāṇḍya-Mahābrāhmaṇa, the Gopatha, and in the Kausītakibrāhmaṇa. The Aitareya contains interesting information about *pravara*; it also says that for kings the *pravaras* of their *purōhitas* were to be employed. If one may hazard a conjecture, it may be said that the *gotra* system was perfected first and the requirements as to *pravaras* in marriages was a further refinement. The treatment of *gotra* and *pravara* in the Sūtra period is a very interesting and controversial matter which must be reserved for separate treatment.

9. *Religion and Customs of a Fishing Caste on the East Coast of India.* By Haran Chandra Chakladar, M. A.—These fishermen occupy the eastern coast of India from Puri down to the Ganjam dirtrict and their sole occupation is fishing on the sea in catamarans and boats. But their rites and customs and even the names borne by some of their sections, amply testify that their ancestors must have

manned ships on the high seas,—evidently those making up the great Indian marine that plied the eastern seas from India to China down to the Middle Ages. At present, they are divided into three sections, two of which intermarry. The Rājā of Mandasa in the Ganjam district is regarded as the supreme head of the caste who regulates all social and religious matters, and Simhāchalam, near Waltair, is one of their holy places.

They have cross-cousin marriage; and marriage with the sister's daughter is permissible. In all their rites, both religious and social, there is a mixture of animistic and shamanistic rites with ceremonies borrowed from the Brāhmaṇical Hindus. Their pantheon includes, on the one hand, Narasimha and S'iva whose worship involves fasts and sexual continence, and, on the other hand, many dreadful deities whose favour has to be won with wine and meat, with goats, pigs and cocks slaughtered with cruel rites. Some of their rites require a cock's chest to be ripped open with the hands and its entrails coiled round the neck, and sometimes a pig is carried round the village impaled on a wooden stake. The sea is worshipped under the name of Gaṅgā-devī, but a man stark-naked functions as priest in her worship. Besides, in the sea is the dreaded Goddess Mārlā Polommā, who draws men away in the undercurrent.

In the rites connected with birth, marriage, death etc. there are some elements derived from the Hindus involving the services of a Brāhmaṇ priest, but there are many other elements that have come down from very primitive times.

10. Similarity of the Cave-Man's Art in India and America. By L. P. Pandeya Sharma.—The rock-shelter at Vikramkhol now famous for its supposed pre-Brāhmī writing believed to be about 4000 years old, contains a mark of a human hand with fingers on the rock-wall along with inscriptions of great antiquity. Similar hand-marks are also found on rock-walls at Ulāpgarh and Nawāgarh on the tops of hills where there are pre-historic rock-drawings and rock-paintings presumably of palæolithic age. All these spots lie within the old Mahākos'ala (modern Chhattisgarh, C. P.) country.

Such marks of human hand and fingers have been discovered recently in America on rock-walls of cliff-dwellings on the side of hills high up above the plains.

In Mahākos'ala and Ōṛissā there still exists a religious custom of bedecking a newly built house or temple with hand-mark, showing five fingers, which in the local dialect is called *Hāthā Denā*, *lit.*—to give or put hand-marks.

A reference to handmark as a *svastika* is found in the old Samskrit drama *Mālati Mādhava* by Bhavabhūti.

The present paper gives in brief an account of hand-marks and draws the attention of scholars to the similarity of this cave-man's art of the Old and the New worlds.

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INDIAN ETHNOLOGY IN CURRENT PERIODICAL LITERATURE.

In *Man* for October, 1933, Mr. James Hornell, contributes an article on *The Coracles of South India.* Indian coracles are found in three varietal forms characteristic of three separate areas, namely, (1) Coimbatore and Tanjore, (2) the upper, and (3) the lower reaches of the Tungabhadra river. All are of the same fundamental type, namely, saucer- or bowl-shaped and therefore circular in plan with the greatest diameter across the mouth. They only differ in size and such details of construction as are necessitated by the differing purposes to which they are put and by differences in environment. After describing the construction of these different varieties of South Indian Coracles and the methods of propelling them (by punting as well as by paddling), Mr. Hornell gives an account of the interesting ceremonies performed at the launching of a new coracle at Karnul and also at the beginning and the end of each ferry season.

In the *Journal of the Bihar and Orissa Research Society*, for September, 1933, Prof. Poure-Davoud contributes an article on 'Mithra Cult'. In this article Prof. Poure-Davoud identifies the Mithra of the Avesta with the Varuna of the Vedas. After tracing the dissemination of the Mithra-cult through Asia-Minor and Greece to the Roman Empire, the author traces the elements of the Mithra-cult appropriated by Christianity.

In the same number of the *J. B. O. R. S.*, the editor of the present journal gives an account of "Some Interesting Aspects of Ōṛissān Ethnology". One such interesting fact is the double identification by most Ōṛiyā Brāmhaṇs, Kstriyas and other Hindu castes of their *gōtra* names, first with some Vedic Rishi and then with the local name of some bird or beast or other natural object in regard to which certain restrictions of the nature of totem taboos are observed. Another interesting fact is the traditional origin of certain sections of Brāmhaṇs from lower castes In some S′udra castes, again, though more than one *gotra* division is recognized, marriage is permitted within the *gotra* but is interdicted within the same family designation or *hudā* or *sangyā*, as it is called, or within families having the same surname or title (*Padit* or *Padavī*). Generally, there can be no marriage where there is direct blood-relationship within three generations, either on the father's or on the mother's side of either party,—one exception to this rule being the practice known as *bhāñjādān* or the marriage of a man's daughter with his sister's son, which is a form of marriage practised as a most disirable one by same Ōṛiyā castes and tribes. In such castes and tribes, the sister's children are held in especial ceremonial regard by their mother's brother. Another interesting feature of Ōṛissān ethnology is the *santak* or sign-manual which is a distinctive label by which different castes and, in some cases, sub-castes are marked out from one another, These *santaks* are certain typical marks drawn on or affixed to documents as substitutes for signature. Generally the mark is a symbol of the special occupation of the particular caste or community to which the individual belongs. Thus, some trading castes have the weighing scales, the writer caste has the iron stylo, the tailor caste has the scissors, and the carpenter caste has the hammer and the cultivating caste has the harrow for their respective *santaks*.

In the *Annals of Bhandarkar Oriental Research Institute* for 1932-33, Miss Sakuntala Rao contributes an interesting article on *Suttee* in which she traces from literature the history of the practice of cremating a widow on the funeral pyre of her dead husband. She finds that this practice was mentioned for the first time in *Visnu Smṛti* which was compiled soon after the 5th century A. D. Bāṇa, who lived in the 7th century A. D., makes a clear reference to various type of *anumaraṇa*, not merely of a widowed wife but also of relatives and freinds; and the annals of Kashmir reveal the practice, from about the 10th century, of *anumaraṇa* not only by a wife or wives but also by concubines and slaves of a dead man. Many small engraved upright stone-slabs or memorial stelæ found in Rajputāna, the earliest being one at Ghaṭiyala in the Jodhpur State dated A. D. 890, commemorate the immolation of Rajput wives as *Satīs* on their husband's funeral pyres. The whole of Rajputānā and Central India are full of such memorial stones. The earliest instance of *Satī* memorial stones has been found at Eran in the Sagar district of the Central Provinces bearing an inscription dated 510 A. D. From this it is inferred that the practice of *Satī* or *Sahamaraṇam* came into vogue about the beginning of the 6th century A. D. The earliest known instance of *anumaraṇam* not merely of a widow of the deceased but of servants &c., occurred in 902 A. D. when on the death of King Saṃkara Varmaṇ of Kas′mīr, his three queens, two maid-servants, and one male servant called Jayasimha burnt themselves on his death. Later instances in Kas′mīr in the 11th and 12th centuries show the practice of *anumaraṇa* immolation not only of the widows but also of servants, male and female, and of mother and nurse along with a deceased person. Not a single instance occurs in Buddhist, Bramhaṇical and Jaina literatures of relatives (other than wives), friends and dependants of the deceased burning themselves on funeral pyres or on separate piles. From South Indian inscriptions, instances of the memorial stones known as *Virā-kal*, commemorating the self-immolation of servants and followers and even a whole retinue on the death of their master and patron, have also come to light. Some inscriptions describe the vow taken previously by the servant or follower who immolated himself in pursuance of such vow.

In the records of Southern India there is a singular instance of an officer immolating himself on the death of a queen in accordance with the oath of allegiance taken previously. The author compares this last instance to the Japanese custom of *harakiri*, and suggests that the similarity is so striking as to suggest that "this custom had its origin in Central Asia among the Mongolian tribes and was later brought to India, where it developed in different parts of the country in different ways".

In the *Journal of the University of Bombay* for July 1933, Mrs. Irawati Karwe contributes an article on the *Ethnic Affinities of the Chit Pāvans.* From a consideration of certain cultural facts and physical features the author concludes, "The Chit Pāvans present a cultural and physical complex made up of Aryan and Dravidian elements which again presupposes on Iranian and pre-Dravidian mixture to a lesser degree".

In the same number of the Journal Mr. M. M. Desai discusses "The Origin of the Horror of Incest and of the Œdipus Complex". He passes in review the theories of different writers, particularly of Freud, regarding the origin of the taboo on incest, exposes the fallacy of the positions taken up by such writers as Westermarck, Elliot-Smith and Freud, and agrees with Malinowski in holding that the incest taboo was 'a non-inherited characteristic of man's mind",—an outcome of social experience of the individual as he grew up in the family and the community. "It must have been discovered during the course of Man's long and laborious process of learning that the occurrence of incest is a disruptive force in the family and the system of attitudes which it involves", ... and that "the occurrence of incest will destroy just those attitudes which are indispensable for the transmission of culture". The writer concludes, "The origin of the Oedipus Complex is to be sought, not in the occurrence of a single fantastic event in the remote past, but in the experience of the individual as he grows up under familial and societal influences. Just as the necessity of maintaining the integrity of the family is responsible for the horror of incest so also is it responsible together with the sentiment of love towards the father for the represion of the hostile attitude towards the father. The system of psychological factors which has been termed the Oedipus Complex by Freud thus arises from the experiences of the individual in a particular kind of social setting in which the family is considered indispensable".

In the *Journal and Proceedings of the Asiatic Society of Bengal,* (New series) Vol. XXVIII, 1932, no. 1. (published in Nov. 1933), Mr. Ekendranath Ghosh contributes his 'Studies on Rigvedic Deities—Astronomical and Metereological'. According to the writers, "the numerous deities invoked in the hymns of the Rigveda comprise celestial, atmospheric, and terrestrial objects of various forms. Even common articles of daily use and various abstract matters (as mind, soul, etc.) have been personified as deities". The present paper deals with deities whose physical nature can, according to the author, be interpreted from the astronomical and meteorological points of view.

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NOTICES OF BOOKS.

The Progress of Man.— *By A. M. Hocart, (Methuen, 1933). Pp. XVI + 316. Price 7 s. 6 d. net.*

This is a most lucid and up-to-date handy text-book of the science of man. For beginners in the science, this volume will prove of invaluable help, and more advanced students too will find the book to be of inestimable value. The principal aspects of human culture are dealt with by the historical method succintly but in a masterly way. The author's approach to his subject is a fresh one in that he emphasizes the truth that all culture is of the mind and that what is called material culture is really a particular form of expression of spiritual culture. Thus he writes: "Material culture is a contradiction in terms: all culture is of the mind. There is not a material thing called culture which exists apart from the human mind. A spade is not culture, but the product of culture, that is of traditional modes of thinking and acting. What is it that interests us in a spade? It is not matter, the iron and the wood: the geologists and the metallurgist will tell you all about the first, the forrester about the second. What the anthropologist and the archæologist are interested in is the form which the mind guiding the hand has given to both, and the purpose which prompted the mind to set the hand in motion." Although most anthropologists accept this theoretical postition, the treatment of "material culture" in the writings of several writers on cultural anthropology, particularly technologists and some extreme diffusionists would apear to lay undue stress on form independently of the idea behind it. Dr. Hocart truly observes, "To erect technology into a watertight compartment, as is usually done, is merely to stultify it, by depriving it of the hope of ever explaining; and science is explaining." Another interesting feature of the present work is the incorporation of new ethnographical material collected by himself. The book will form an invaluable handbook for the student of the evolution of man's customs and works.

Introduction to Sociology. *By E. B. Reuter and C. W. Hart. (McGraw-Hill Book Co., New York Inc. 1933) Pp. X+541. Price $ 3.50.*

This is a well-written text-book of sociology for students, written on the lines of Park and Burgess' work which was reviewed in this journal sometime ago. Social phenomena and processes are carefully described and explained.

The concept of social interaction which alone gives synthetic unity to sociological science is defined, analyzed into its various characteristic forms, and employed throughout as an explanatory principle in the study of personality and personal types, social groups, institutional forms and the phenomena of social control and collective behaviour. An amount of concrete factual material has been furnished to illustrate the main ideas and principles. Exercises and problems for students, questions for class discussion, and select references for supplementary reading, add to the usefulness of the volume for the student.

Race Mixture. *By Edward Byron Reuter (McGraw-Hill Book Co. Inc. New York. 1931) Pp. 224 Price $ 2.50.*

These interesting studies in racial intermarriage and miscegenation appeared in the form of magazine articles at different times; and the author has placed students of Sociology under his debt by collecting them into book-form. In the first paper, headed "Civilization and the Mixture of Races", he discusses the two opposing doctrines regarding the effects of Racial Mixture,—namely, one which condemns racial amalgamation as resulting in a decadence in racial stock and a corresponding decline in culture status, and the other which emphasizes the importance and the cultural desirability of racial amalgamation as resulting in the heightening of racial capacity and cultural worth. Whereas the advocates of the former position base their argumnts mainly on the supposed existence of inequatity in the mental endowment of racial groups, the advocates of the latter position seek to support it by a body of positive evidence drawn directly from the character, and status and achievements of mixed-blood individuals and groups which are found to be, as a whole, superior to at least one of the ancestral types, and also by a body of negative evidence showing that the population groups in the modern world with the highest approximation to racial purity, *viz.* the fragments of primitive groups stills surviving, are just those groups of most meagre cultural accomplishment. The author very pertinently points out that the fundamental assumption of both schools of thought, namely, that race and culture are independent facts and processes, is erroneous, but that in an indirect way the crossing of races is conducive to social change. Racial miscegenation in its early stages contributes to social disorder, disintegration and confusion of standards, but it is from social disorganisation that progress must proceed; change is not possible without it. In his paper on "The Hybrid as a Sociological Type", the author has cited various instances to justify the generalization that "in bi-racial situations comprising two racial groups of unequal culture, the hybrids tend to occupy an intermediate social and cultural status and to produce a markedly higher percentage of men of prominence and leadership than does the ethnically unmixed native group." The explanation of this, says our author, "appears to rest not in the biological fact of mixed blood as such but in the culture contacts and personal mobility consequent upon the mixed ethnic origin." Thus it is "not an evidence of superior capacity but a reasonable measure of superior opportunity." In his paper on "The Personality of Mixed Bloods" the author shows that the mixed blood is an unadjusted person whose immediate group has no respected place for him in their society, and though in ideals and aspirations he is identified with the culturally dominant group, in social role and cultural participation he is identified with the excluded group, so that he is a man of divided loyalties. The author conclude with the very sound and useful observation—"It is only when the resulting conflict is resolved by the mixed blood's accommodation to the socially defined place—mebership in, and leadership of the backward group—only when he identifies himself with it, participates in life on that basis, and finds the satisfaction of his wishes in that group organization, that he escapes the conflict resulting from his divided heritage. It is only through an identification with the social group to which the social definitions consign him that he can find a tolerable life and develop a wholesome personality." The remaining papers deal with the position of the Mulatto population of America.

The Diffusion of Culture. *By G. Elliot Smith. (Watts. 1933) Pp. X+224. Price 7s. 6d. net.*

In this volume Prof. Elliot-Smith repeats in a concise form his arguments in favour of his diffusion theory of the growth of human culture, and seeks to controvert from their own writings the main arguments of the eminent writers who, he thinks, are responsible for confusing the real issues. These writers are Robertson, Prescott and Tylor. The author thinks that there is now ample evidence for the definite elimination of the essential difference between the evolutionist and the diffusionist views. But in the present volume no fresh arguments or considerations in favour of the distinguished author's well-known views on the subject appear to have been brought forward, except that he gives a long laudatory account of the success of Islam in carrying ideas and customs from Arabia to distant Spain on the west and China and Indonesia on the east, as affording a concrete example of a diffusion of culture—"the most romantic history of culture drift which is known to us in detail." The instance is also cited of Buddhism as a great carrier of ideas and art from India, far and wide. The civilisation of America, our author thinks, was not evolved in America, but its "germs were planted in Central America by immigrants who brought across the Pacific the high culture then flourishing in Cambodia and Java," and these immigrants settled in particular localities "because they found in those places the particular objects of their search,—pearls and gold, precions stones and copper,—to all of which they attached an arbitrary and magical value, which had been created by certain historical events in the Old World" Prof. Elliot Smith explains that what he claims is only that Egypt was the *pioneer* in the invention of civilisation, and not that "all the arts and crafts, as well as the customs and beliefs, of the whole world came from Egypt." "The Egyptian", it is maintained, "created the needs and ideas which provoked men to go on devising new inventions."

The author asserts that he does not deny the possibility of a custom or belief being invented twice independently. But he declares his inability to find any evidence to show that it has happened.

The Fear of the Dead in Primitive Religion.— *By Sir James G. Frazer. (Macmillan, 1933). Pp. VIII+204. Price 10 S. 6d net.*

In this volume are published six Lectures delivered on the William Wyse Foundation at Trinity College, Cambridge in 1932-33. These lectures are meant to be an instalment of a larger work on the subject to which all anthropologists will eagerly look forward with a prayer to Heaven that this indefatiguable *savant* may be long spared to enrich ethnological science with many more brilliant contributions. As usual with this prince of ethnologists, he packs these lectures with a wealth of illustrative material regarding the belief in immortality among the backward peoples of the world The beliefs of these peoples on the subject are, it is pointed out, very varied.

Some entertain "the democratic doctrine of immortality for everybody", some "the aristocratic doctrine of immortality only for noblemen", some "the moral doctrine of immortality only for the good", some, again, "the immoral doctrine of immortality only for the bad", and, lastly, some "the blighting doctrine of immortality for nobody". Which of these is the true solution, "it is not for the simple-minded anthropologist to decide". But so far as available data may be taken to indicate any general attitude of the "primitive" mind towards the dead, Sir James finds that though some primitive peoples seem not to fear the spirits of their own dead, and though the spirits of the dead are sometimes supposed to help the living in various ways, "primitive" peoples on the whole regard the spirits of the dead with more fear than affection. The general aim of primitive men in dealing with the spirits of the dead is to keep them at a distance, and send them away by persuasion, force or fraud. As usual with our author, his masterly and brilliant exposition is at the same time marked by his characteristic candour, caution and judicial impartiality.

The Earth: Our Ever-Changing Planet.—*By Chester A. Reeds, Ph. D. (University Society, New York, 1932). Pp. IV+120.*

The Smallest Living Things: Life as Revealed by the Microscope.—*By Gary N. Calkins, (University Society, New York. 1932). Pp. IV+135.*

These are two more books of the excellent *Highlights of Modern Knowledge Series,* some volumes of which we had reviewed in our first number of the last year. Like their predecesors, these two volumes are written by specialists who present their subject-matter in a popular but masterly way within the comprehension of the general reader.

In *The Earth*, Dr. Reeds begins with a historical resumê of geological thought throughout the ages, and the different theories of the origin of the Earth. In successive chapters he gives clear and sucient accounts of the Atmosphere; the Hydrosphere; the Lithospere; the Centrosphere; Volcanoes and the cause of their repeated eruptions; Earthquakes, their causes, duration and distribution; the Geologic Record and the significance of fossils and stratified rocks; and finishes with a Chart of Geologic time.

In the *Smallest Living Things*, Dr. Gary N. Calkins makes a comprehensive but clear survey of life revealed by the microscope. As the author informs us in his Preface, "it is not a catalogue of minute forms of animal and plant life nor is it a guide to the fascinating mysteries revealed by the microscope; rather it is written as a basis for reflection on some of the fundamental problems concerned with the mechanisms and activities of living substance", and to provoke thought with regard to the meaning of life. A new point of view put forward for the first time in this book is the transfer of all chlorophyll-bearing flagellates from the classification of Protozoa to the botanical classification of Algae.

The Andaman Islanders.—*By A. R. Radcliffe-Brown (University Press, Cambridge, 1933. Pp. XIV+510. Price 30 S. net.*

The first edition of this excellent book was published in 1922 and was reviewed at some length in this Journal in its September number of the same year. The present edition is practically a reprint of the first edition with the addition of a few pages on the Andaman languages. The author is not content with investigating and describing the physical characters, language and culture of the Andaman Islanders, but has sought to discover the meanings of myths, beliefs and ceremonies, the ideas what these things express,—not by a reference to his own mental life but a reference to the primitive mental life of the Andamanese themselves. Chapters V & VI of the book covering some 80 pages are devoted to the interpretation of Andamanese customs and beliefs, myths and legends, which are fully and accurately described in the preceding chapters. The author's interpretation is highly interesting, instructive and thought-provoking.

BOOKS FOR SALE.

at the "MAN IN INDIA" office,
Church Road, Ranchi, B. N. Ry.

1. ORAON RELIGION AND CUSTOMS.

By RAI BAHADUR SARAT CHANDRA ROY, M. A., B. L., M. L. C.

Price.—*Twelve Rupees.*

SOME OPINIONS ON THE BOOK.

Col. T. C. Hodson, M. A., *Reader in Ethnology in the University of Cambridge :*— "A book like this—sane, clear, scientific, sympathetic, comprehensive—is of prime importance to the student of Anthropology, to the student of Religion and to the Administrator who seeks or should seek to understand the forces which govern human activities, and it is full of charm and interest for the general reader who desires to know something at once accurate and inteligible of the Peoples of India".

Dr. R. R. Marett, M. A., D. Sc., *Rector of Exeter College Oxford :*—"In my opinion the latest work of Rai Bahadur Sarat Chandra Roy, namely, *Oraon Religion and Customs* (Ranchi, 1928), fully maintains the high standard of accurate observation and critical interpretation already reached by him in his well-known researches for which European scholars are exceedingly grateful ; for it is obvious that, so long as he accepts the same canons of inductive enquiry, the Indian investigator has a better chance of probing and penetrating to the truth in regard to all things Indian and especially in regard to the psychological facts."

Sir Arthur Keith, M. A., M. D., L. L. D., F. R. C. S., F. R. S., :—"I am very conscious of the great work you have done and are doing. There is no school or college of Anthropology but will make a special place for this your latest work both on its library shelves and in its heart. I doubt if any one has ever done so much for the Anthropology of a people as you have done for the Oraon. I endorse all my friend Col. Hodson has written in his preface and in particular would I underline your disinterested and persistent labour for the advance of Science".

Dr. Roland B. Dixon, A. M., Ph. D., *Professor of Anthropology in the Harvard University, Cambridge, Mass.*, :—

I was delighted to get your recent book on *Oraon Religion* and have reviewed it for the American Anthropologist The

book carries on the high standard which you have set in your previous works, and presents the material in a very effective from. I congratulate you on it most cordially.

The Times (London, February 28, 1929):— A very detailed account of the religion and magic of the Oraons of Chota-Nagpur, a people of Dravidian speech. It is based on twelve years' investigation by a highly competent ethnologist, who has already published a work on this people. It can be seen what a rich field there is in India among the more primitive peoples, which, indeed, can best be tilled by trained Indian ethnologists. There is a long chapter also on movements during the last hundred years and more among the Oraons towards a higher, simpler religion, which will interest students of religious psychology.

The Nature (London, March 9, 1929):— Ethnologists are indebted to Sarat Chandra Roy for his valuable book "*The Oraons of Chota-Nagpur*" (1915), and now he has provided a study of *Oraon Religion and Customs* which should be read by all those who are interested in primitive religions. The especial value of this book is not merely in the detailed accounts of socio-religious and religious rites and ceremonies and magical practices, but in the very suggestive religious transformations that have occurred since the Oraons arrived, and the process is still continuing.

The Discovery. (London, February 1929):— When the history of ethnological study in India comes to be written, the name of the author of this work is least likely to be overlooked. By his own work and by his encouragement of others as editor of the periodical *Man in India*, he has deserved well of his colleagues in anthropology. Sarat Chandra Roy has published here the promised continuation of his studies of the *Oraon* of which the first instalment appeared as long ago as 1915. The author is here concerned only with their religious and magical beliefs, both directly in themselves and in their relation to the Oraon social institutions, such as are involved in birth, marriage and death. Of particular interest to students of folklore and primitive religion are the sections dealing with agricultural ceremonies and the belief in witchcraft which afford much useful material for both comparison and contrast with European folklore.

A final chapter deals with revival movements and modern tendencies in Oraon religion which is highly suggestive and deserves the careful attention of all who are in any way interested in or connected with the problems of administration among peoples of non-European culture.

The Statesman (Calcutta, March 17, 1929):— The Rai Bahadur is wellknown for his excellent monographs on the *Mundas* and the *Oraons*, and is everywhere recognized as an anthropologist of rare insight. India, with its great variety of races, nationalities, creeds, customs, and cultures affords an excellent field for the anthropologist and sociologist. This new book will be studied with delight by scientists in many countries. The author has made a capital use of his opportunities of studying the several tribes of aborigines in Chota-Nagpur and Central India.

The Forward (Calcutta, February 19, 1929):— The learned author is a pioneer in the field of anthropology and needs no introduction. His previous works— *The Birhors*, *The Mundas* and *The Uraons* are classics and had already established a world-wide reputation for him. The present volume is a befitting successor to his previous works. It is the outcome of the author s deep and laborious investigations into the religion and customs of the *Oraons*, a much-neglected tribe of Chota-Nagpur, carried on for a long period of about twelve years and as such an invaluable treasure to students of anthropology and students of religion.

The get-up of the book is excellent. In short, the book leaves nothing to be desired.

The Servant of India (Poona, May 30, 1929):— The book is worthy of the author, Rai Bahadur S. C. Roy of Ranchi, who is a well-known student of anthropology relating to the aboriginal tribes of Chota-Nagpur and the Central Indian Plateau

The chapter on socio-religious rites and ceremonies is very interesting and demands careful study. The last chapter on the *Oraon Religion* with its revival movements is exceedingly instructive.

We strongly recommend the book to students of anthropology as well as to the general reader.

The Modern Review (Calcutta, January, 1929)·— Rai Bahadur Sarat Chandra Roy is one of the few Indians who has shown a keen interest in the study of the primitive folks of this country. In fact, the works that he has already published have earned for him the reputation of being our foremost authority on the aborigines of Chota-Nagpur. The present volume on *Oraon Religion and Customs* is the sequel to his earlier work on *The Oraons of Chota-Nagpur* (1915). In it the Rai Bahadur has given an exhaustive account of the religions and social institutions of this interesting tribe, the result of close personal observation and intimate acquaintance spreading over a period of twenty years. He has analysed the Oraon beliefs into their purely religious and magical sides and has described the customs and rites associated with the chief crises of life. As an authoritative treatment therefore of Oraon life in all its phases, including some of the modern tendencies, his account could hardly be improved.

The book is well-printed and illustrated and the price is moderate for a work of this kind. For students of Anthropology in the Post-Graduate classes of our Universities it should form a very handy and reliable text-book for some of their courses.

The Quarterly Journal of the Mythic Society (Bangalore, July, 1929):— Rai Bahadur Sarat Chandra Roy is too well known in the anthropological world to need any introduction. The publication of a volume on *Oraon Religion and Customs* was foreshadowed in 1915, when his *Oraons of Chota-Nagpur* first appeared. He has since been engaged in the investigation of their religion and customs for well-nigh twelve years, and the results are embodied in the present richly illustrated volume.

The work is full of charm and interest to the general reader who desires to know something of the religion and customs of this interesting people. We have great pleasure in commending this volume to all students of anthropology.

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2. **THE BIRHORS** : *a Little-known Jungle Tribe of Chota-Nagpur.*—By Rai Bahadur Sarat Chandra Roy, M. A., B. L., M. L. C. Pp. viii+608, 36 plates. (Ranchi : "*MAN IN INDIA*" Office 1925). Price Rs. 10- ; or 15 s.

SOME OPINIONS.

Sir JAMES G. FRAZER, D. C. L., L. L. D., Litt. D., F. B. A., F. R. S., O. M., Professor of Anthropology in the Trinity College, Cambridge writes :—

.........I find it characterised by the same high qualities a mark your former monographs on the **Mundas** and **Oraons**. You have rendered a valuable service to anthropology by placing on record the customs and beliefs of a very primitive tribe about which very little was known before and which, but for your careful and prolonged observations, might have passed away practically unknown. As in your former volumes I admire the diligence with which you have collected a large body of interesting facts and the perfect lucidity with which you have set them forth. The book is a fine specimen of a monograph on an Indian tribe and must always remain the standard authority on the subject. I congratulate you heartily on your achievement, and earnestly trust that you will continue your valuable investigation and give us other similar accounts of other primitive and little known Indian tribes.

Sir ARTHUR KEITH, M. D., F. R. C. S., L. L. D., F. R. S., Conservator of the Museum and Hunterian Professor, Royal College of Surgeons of England, writes :—

.........You have done a splendid piece of work—one which will make Europe indebted to you.........

Dr. A. C. HADDON, M. A., Sc. D., F. R. S., Reader in Ethnology, of Cambridge, writes :—

.........Your accustomed excellent work. It is a most useful contribution to Indin Ethnology.........

Dr. ROLAND B. DIXON, A. M., Ph. D., Professor of Anthropology in the Harvard University writes :—

Signature of Station Incharge ------------

Date of submission ---------

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1999-2000

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